

SIOUX COUNTY COMPREHENSIVE LAND USE DEVELOPMENT PLAN

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2007 SIOUX COUNTY COMPREHENSIVE PLAN EXECUTIVE SUMMARY

The comprehensive land use plan, required by Iowa law for those counties and cities wishing to enforce zoning regulations, annexations, urban renewal tax benefits and other land use controls, is developed to be Sioux County's primary guide for future land use policy decision making. This planning document is comprehensive in nature, assessing past and current conditions and making projections about population, housing, economic conditions, and land use issues. The core of the plan is comprised of two primary sections, to be supported by the remainder of the collected data and statistical analysis recorded in this plan.

- 1) **Goals, Objectives & Policy Recommendations** reflecting the next 15 to 20 years in Sioux County; and
- 2) **Future Land Use Map** displaying an ideal pattern of future land uses and development.

Included within this executive summary are the general comprehensive plan goals and the proposed land use map. Supporting data is available within the main body of the plan, as well as additional policy recommendations for the future of Sioux County. This document is intended to update and replace the 1972 Sioux County Comprehensive Plan.

SUMMARY OF OVERALL COMPREHENSIVE PLAN GOALS

Goals are broad statements of intent covering a long period of time.

1. *Sioux County should strive to preserve separate and distinct urban and rural characteristics while preserving the agricultural nature of the county.*
2. *Sioux County should provide long term guidance through implementation of land use controls (zoning and subdivision regulations) in an effort to minimize and control conflicting land uses.*
3. *Sioux County should achieve a balance among land uses to facilitate economic development while also considering the responsibility to preserve prime agricultural lands and natural resources.*
4. *Sioux County should facilitate the provision of necessary and required county services to its residents, businesses and industries in a reasonable, efficient and fiscally responsible manner.*
5. *Sioux County, in recognizing current growth patterns and potential growth, will review and consider developments which will be beneficial to the managed and planned growth of the county.*
6. *Sioux County should welcome the development of new residential areas. Residential development should be considered in rural areas when best suited to the environment and market conditions.*
7. *Sioux County has an environment which promotes agricultural, animal pharmaceutical, biotechnical and related industries and should continue to promote these fields.*
8. *Sioux County maintains a healthy mix of land uses. The separation and delineation of existing or potential conflicting land uses will promote a healthier, safer, and more prosperous county.*
9. *Sioux County should develop and maintain a transportation and infrastructure system that will provide for the safe, convenient and economical movement of people and goods.*

These nine (9) long term goals are the most significant element underlying the comprehensive development plan. The land use objectives and the policy recommendations formulated in this plan are intended to achieve these overall goals.

GENERAL DEVELOPMENT TRENDS AND FUTURE OUTLOOK

General development trends guide the comprehensive planning process and are summarized as follows:

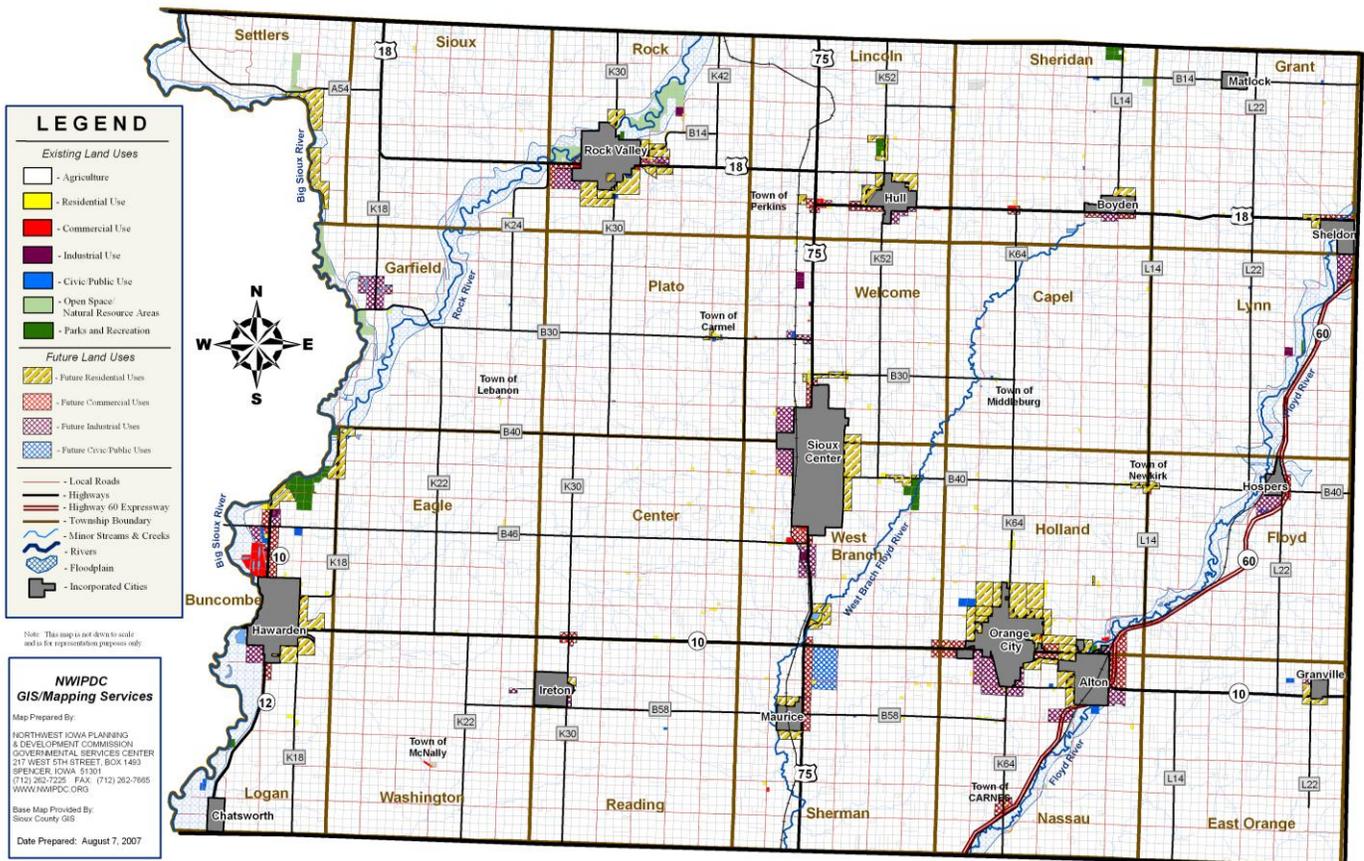
- Sioux County (pop. 31,589) comprises 1.1 percent of the State of Iowa (pop. 2,982,324) population based on 2000 Census data.
- Sioux County has a strong population core with an influx of new residents resulting in a growing population over the past several decades. Based on past and current trends, the county's population is expected to continue to steadily increase over the next 15 to 20 years. Future projections show an increase in population to 36,460 residents by the year 2030.
- Sioux County is a youthful and vibrant county. The average age in Sioux County is 32.8 years and significantly lower than the state at 36.6 years. While only 15% of the county's population meets the Census Bureau's definition of elderly, Sioux County boasts 17.1% of its population as being under the age of 18.
- Between 2002 and September 2006, nearly 110 permits were issued for residential construction in the rural portion of Sioux County alone, not counting the number of new housing units constructed within the cities. Projected housing numbers indicate a need of nearly 1,500 new housing units over the next 5-10 years and more than 3,200 housing units by 2030 in Sioux County.
- Sioux County's housing stock is continuing to increase in value. The median owner-occupied housing value in 2000 was \$84,700 as compared to \$82,500 for the State of Iowa. Furthermore, Sioux County is also maintaining an efficient overall vacancy rate of 5%, but a much tighter housing market in owner-occupied housing units with only 1.4% vacancy.
- Several economic indicators including steady gains in the county's labor force, low unemployment rates (2.5% in 2006), and increases in multiple employment sectors are good indicators regarding the future of Sioux County's economy. The core of Sioux County's economy and business community will continue to be supported by the manufacturing and education/healthcare industries.
- The county's diversification into the animal pharmaceutical, biotechnical, animal science and alternative energy industries will continue to support a niche market for these high tech and specialized industries which are welcomed and supported in Sioux County.
- Sioux County must work with the incorporated cities in the county to develop and maintain an adequate transportation and infrastructure system that will provide for the safe, convenient and economical movement of people into and throughout the community.
- At \$241 million in retail sales (2004), Sioux County is continuing to expand its commercial base. Also, a trade area capture analysis finds that retail sales in Sioux County are supported by an estimated population base of more than 41,000 customers, much larger than the 32,000 residents of Sioux County.
- Sioux County offers a diversified number of parks, recreational areas, and natural resource or public access areas to its residents and guests. County leaders and elected officials should establish a pattern of land uses that will maximize the enjoyment and convenience of its residents while considering the provision of parks, recreational and natural resource areas.

IMPLEMENTATION OF THIS PLAN

Implementation strategies address those actions and means needed and recommended to apply the stated goals, objectives and policy recommendations. This document may be amended as deemed necessary in a legal and orderly manner. All governmental bodies, businesses, individuals, and corporations are strongly encouraged to comply with the spirit and intent of the comprehensive plan. Listed below are a few of the suggested implementation strategies which may be explored to fully realize the maximum benefit from this planning document.

- Create a three-year action plan addressing county growth, city growth and annexation policies.
- Establish an annual plan review workshop in which members of the public are invited to share their thoughts, concerns, and visions for Sioux County's future.
- Sioux County, as a growing population center, must exhibit a welcoming and accommodating atmosphere to new residents and businesses.
- In establishing any new policy, remember to protect the rights and interests of property owners in Sioux County. Consistency and fairness is a must.
- Once the county updates its enforcement ordinances it would be beneficial to have the zoning administration and enforcement consistent with new or proposed rules adopted by the county.

SIOUX COUNTY FUTURE LAND USE PLAN



2007 SIOUX COUNTY LAND USE MAP

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Chapter 1. PURPOSE OF THE COMPREHENSIVE PLAN

A comprehensive plan is a combination of stated objectives and policy recommendations integrated together and working toward a common set of goals outlining the existing land uses and future needs of the county; while at the same time looking toward the future to establish a guideline in relation to long range goals and objectives. A land use map, a policy plan, a strategic plan, and even a set of goals are all useful tools in the planning process, but they are not substitutes for a comprehensive plan. These tools should be used as part of the whole, or as components of the comprehensive plan.

The comprehensive planning process consists of utilizing past and present efforts and information provided by predecessors and integrating this information into a vision for the future. What exactly is a “vision?” A vision is an image or foresight into where representatives of Sioux County wish to see the county directed in the future. A common vision is critical for the development of a comprehensive plan, because once a vision statement has been established; it serves as a focal point for all other long range plan goals and specific policy statements to aim for.

A comprehensive plan’s working expectancy will vary with each individual governmental body, but averages between fifteen and twenty years. The plan is an intense study and analysis into specific components that make the county work. Another aspect that is explored in the comprehensive plan is the physical county itself. Information on land uses, infrastructure, natural characteristics, and other features are very important in determining the current condition of the county and likewise important in determining where the local governing officials should “envision” the county in the future. This information is extremely useful in determining objectives and policies relating to agricultural lands, the natural environment, the built or developed environment, varying land uses, and other such activities that directly affect the physical aspects of Sioux County.

Most importantly, this comprehensive plan is not “etched in stone” per se. This document, specifically the visioning, goals, and policies section of the plan, is intended to be and should be amended as needed. As the county grows and changes from year to year, so will its needs. Therefore, the comprehensive plan should reflect new changes and possibly new objectives or policies toward specific actions. Ideally, the comprehensive plan would be regularly updated on an annual basis. Actions recommended by the planning and zoning commission and taken by the Board of Supervisors can amend this plan to reflect current trends or simply a change in philosophy regarding one or more of the policy statements.

Chapter 2. PLANNING ELEMENTS

Once the working definition of planning has been internalized by those involved, the steps of the actual process should commence.

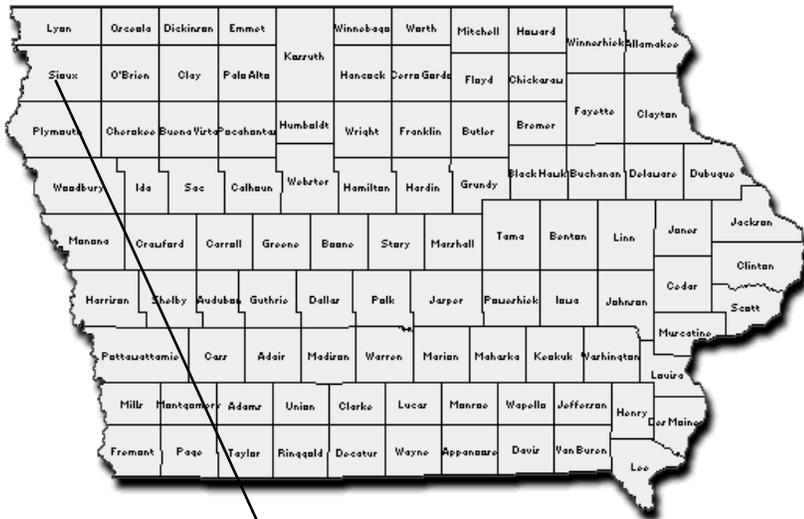
- 1) The primary stage of a planning program is **research and data collection**. It is from this supply of data that all decisions will be based, indicating that the more extensive and specific the data is the more accurate and functional the decisions. The first step is to identify all sources of existing data, and establish what data needs exploration and research.
- 2) **Analysis of the data collected** is an ongoing activity conducted at the same time the research and data collection is being pursued. Analysis involves the collection and presentation of data in written and/or graphic form to establish a complete base of existing conditions. Once this base has been established, the analysis proceeds into projection of future trends and growth.
- 3) All of this **input will facilitate the evolvement** of certain broad and general goals for the planning area. A goal is that aim or end toward which effort is to be directed. Objectives involve bringing the goals closer to reality and specifically establishing those accomplishments that are desirable and closer to realizing established goals.
- 4) The **goals and objectives** constitute the framework for plan preparation. Before submission of the plan to the legal bodies concerned, it should have been studied and commented upon all the involved sectors and altered accordingly.
- 5) **Legalization of the plan** involves the plan adoption by the Board of Supervisors. Public hearings and wide distribution of the plan should take place before formal adoption proceedings. The plan must meet with the approval of those in the planning area to function properly.
- 6) **Actual implementation of the plan** is not carried out by any one department or agency, but is out of necessity a combined effort of all government, private and related entities. The plan will list and define various tools of implementation (zoning and subdivision regulations, capital improvements programs, etc.).

This comprehensive plan is to be used by both public and private sectors in land use decision-making processes. The private sector, including developers, investors, industry, and businesses will use this document to become informed of the official positions of the county regarding land use and policy issues. The plan will provide the general public with an outline to make individual land investments, purchases, or development decisions. The public will become more informed as to the county's policies regarding land uses that are permitted, encouraged, prohibited, or protected.

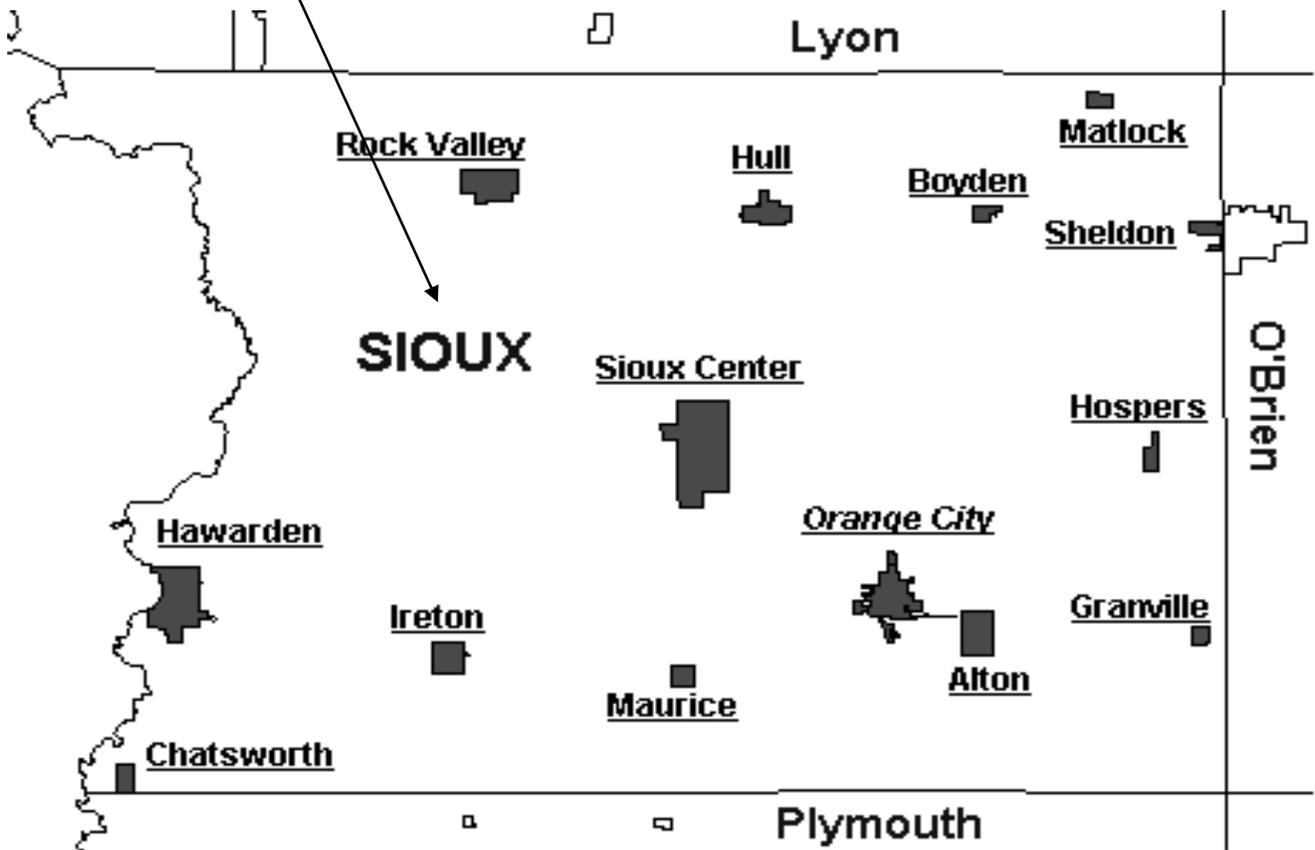
The public or government sector, including but not limited to Sioux County, State of Iowa and the Federal Government shall use the plan as a guide in land use decision making processes. While this working document is the result of the efforts of the county, it has been prepared representing the interests of all Sioux County residents. Any activities affecting land uses by the county, state or the United States Federal Government should follow the comprehensive plan.

Sioux County - Location Map

Figure 1



State of Iowa



Chapter 3. COUNTY HISTORY

Sioux County, located in the northwest corner of Iowa, was formally organized on January 20, 1860. Its name is in honor of the Sioux Indian tribe, which was once prosperous in the area. Sioux means “Snakes” or “Little Snakes.” The first county seat of Sioux County was Calliope. It was a small village, established in 1860 with no more than 15 residents, the entire population of the county at that time. The first courthouse was built in Calliope in 1860 and served the county until 1872. The original courthouse was a log cabin that contained portholes, like a fort, for protection from outlaws and Indians. The building also served as living quarters for county officials and other residents.

Beginning in 1869 a large increase of immigrants, mostly from the Netherlands, moved into the area. The town of Orange City was laid out by Henry Hospers in the eastern part of the county, and the immigrants from the Netherlands flocked to the area. It was not long before a rivalry developed between the two towns. This rivalry became so heated that, on January 22, 1872, 55 bobsleds left Orange City bound for Calliope. Along the way they met up with 25 more sleds from the Hull area. When these raiders arrived at Calliope, they cut a hole in the log courthouse and removed the safe and all of the county records contained within. They then hauled the 5,000-pound safe back to Orange City. The safe and county records were later returned to Calliope; however, the county seat was officially moved to Orange City with an election held in November 1872.

Photo of Historic Sioux County Courthouse



The old log cabin in Calliope was sold and county offices were scattered around Orange City for several years. Then, with the help of a bond issue, the construction of a red and buff colored sandstone building began in June 1902. Construction was stalled when the construction company went bankrupt later that year. The building was finally completed in October 1904. There was a huge celebration containing bands, glee clubs, speeches and even fireworks.

Lightning struck the courthouse tower in 1907, knocking off about four feet of the pinnacle, which broke many roof tiles. A 10-foot bronze statue of “Lady Justice” (Vrouwe Justitia), replaced the broken pinnacle. From 1976-1982 extensive improvements were made to the courthouse and its facilities: a new roof, renovated courtroom, an elevator, the latest computer system, and new voting machines. In 1977, the Sioux County Courthouse was placed on the National Register of Historic Places.

Source: <http://www.siouxcounty.org> segments of this county history section were summarized and paraphrased from the *History of County Governments in Iowa*, published in 1992 by Iowa State Association of Counties, Des Moines, Iowa.

Figure 2 – Historic 1895 map of Sioux County, Iowa



Places of Historic Significance in Sioux County – National Register of Historic Places

According to the National Register of Historic Places, there are three (3) buildings carrying the distinction of being placed on the national register. These sites are important to the understanding and knowledge of the county's founding forefathers and provide those residing and visiting Sioux County a glimpse into what life was like over one hundred years ago. Below is a listing of each of these nationally registered historic places with a brief background about their historical importance.

Fleshman House (Charles M. and Emma M Fischer) – This single family house located in Hawarden was added to the national register in 1993. The house provides a historical account of late 19th century architecture in the Italianate and Queen Anne styles. The period of historical significance is 1875-1899, 1900-1924.

Sioux County Courthouse – The center of government operation in Sioux County, the courthouse is an excellent example of Romanesque architecture. Located in Orange City, this structure holds architectural and cultural significance in the county and was added to the national register in 1977. The period of historical significance is 1900-1924.

Zwemer Hall, Northwestern College – This Romanesque styled building was added to the national register in 1975. This building, as part of the Northwestern College's campus in Orange City, was added because of architectural and historical events. The building's period of historical significance is 1875-1899 and the areas of historical significance are architectural and education.

Chapter 4. PUBLIC PARTICIPATION AND PLAN HISTORY

BACKGROUND OF COMPREHENSIVE PLANNING

In March 1967, the Northwest Iowa Regional Planning Commission was officially established by the Board of Supervisors of the four participating counties of Lyon, O'Brien, Osceola and Sioux. The formation of the Northwest Iowa Regional Planning Commission marked the first real effort of a genuine "regional" commission in Iowa. The principal purpose of the Regional Commission was to undertake planning studies on a regional basis and facilitate cooperation among the various governmental bodies within the region. One of the first tasks of the Regional Commission was to secure the services of a professional planning consultant to undertake the necessary studies to develop a comprehensive plan for the entire four-county region. That contracted work resulted in a series of planning reports being prepared between 1968 and 1972 leading up to the adoption of Sioux County's first comprehensive plan.

Sioux County initiated its planning efforts in the spring of 1968 by joining with the incorporated cities in the county to participate in a 701 Housing and Urban Development (HUD) planning program under the direction of Harland Bartholomew and Associates from Saint Louis, Missouri. The planning and engineering consultants and a citizen advisory group developed a plan format that was adopted by the Sioux County Board of Supervisors in April 1972.

Over the course of the next three decades, the Sioux County Planning Commission, Board of Adjustment and Board of Supervisors actively utilized the comprehensive plan in making land use decisions to guide zoning issues and control growth within Sioux County. However, especially within the past decade, growth rates have exceeded land use projections within the plan and several major revisions within the zoning ordinance and subdivision regulations became necessary.

During the summer of 2006, the Board of Supervisors indicated the need to update the comprehensive plan and substantially revise the zoning ordinance and subdivision regulations to reflect the trends, needs, and philosophies of current growth trends. The Board of Supervisors with guidance from the county zoning administrator sought the assistance of the regional Council of Governments (COG), of which Sioux County is participating member. The Northwest Iowa Planning and Development Commission staff planners initiated the comprehensive plan update with a countywide public visioning meeting conducted in September 2006.

PUBLIC PARTICIPATION

Sioux County combines rural Iowa charm and friendliness with many amenities of the "Big City" life found in and near Sioux County. Residents of Sioux County are very proud of their heritage, lifestyles, and wish to continue to offer the small town, charming atmosphere known by the locals and experienced by visitors and guests. Sioux County's location, work ethic, religious importance and overall quality of life has made this place a very desirable place to visit, reside, and do business.

On September 21, 2006 the citizens of Sioux County were invited to attend a public forum to discuss land use and quality of life issues important to the county with regards to the comprehensive planning process. Planning staff from Northwest Iowa Planning and Development Commission facilitated the meeting. After explaining the comprehensive planning process, staff asked guests to openly share their thoughts about the strengths that Sioux County can offer its residents, some of the

challenges facing the county today and an insight into the future vision of what residents would like to see Sioux County become in 15 to 20 years. There were over 20 guests in attendance at the public visioning meeting. The following summary is a combination of public verbal comments received during the meeting and written comments received by the Planning and Zoning Commission.

Local residents were asked to identify **STRENGTHS** of Sioux County:

- Number of religious organizations and faith based institutions
- Good quality education system along with the number of faith based schools and colleges
- The strong agricultural core of Sioux County
- Strong livestock industry
- Excellent commercial and industrial uses located within the communities of Sioux County
- An increasing rural industrial base supported by alternative fuels and innovative agricultural based industries
- Numerous active, thriving and growing cities in Sioux County
- Excellent healthcare system in Sioux County consisting of four hospitals and many clinics
- Multitude of housing options, price range and availability in both the cities and rural sectors
- Many cultural resources and recreational opportunities
- Numerous college facilities for both sporting events as well as cultural, artistic and music events
- A number of quality golf courses both in rural areas and in the cities
- A feeling or spirit of cooperation and collaboration between city governments within Sioux County; also the county government works well with each of the municipal governments
- Excellent emergency services personnel and departments
- A sense or belief that Sioux County is a safe place to live; a certain feeling of comfort living in Sioux County
- Good quality roads network; adequate secondary and farm to market roads
- The quality of people and the sense of family living in Sioux County
- The strong spirit of family farming

Local residents were next asked to identify those **CHALLENGES** facing Sioux County:

- Heavy concentrations of large livestock operations and confinement facilities
- An increasing number of urban vs. rural development issues
- Existing and potential future conflicts between rural agricultural and rural industrial uses
- An increasing separation and potential conflicts between family farms and commercial farming
- A deterioration or existing county roads; a need for continued road maintenance
- Potential strain on existing infrastructure due to projected increases in traffic flows
- Overall increase in traffic numbers, especially in industrial and heavy truck traffic, will diminish the “rural charm” of Sioux County
- Continuing questions on the demand that future development will have upon energy supplies and pricing
- An increasing number of telecommunication towers being constructed in rural areas
- The potential for conflicting land uses between rural housing or agricultural uses and future alternative energy sources (i.e. wind generators, wind farms)
- The continued loss of prime agricultural lands due to development

Local residents were next asked to identify those **CHALLENGES** facing Sioux County (*continued*):

- An anticipated learning curve of diversity issues due to continued integration of minorities
- Lack of planning resulting in a continuation of sporadic rural residential housing
- A demand for additional future rural residential subdivisions and housing options as more families desire the “country” living with access to “city” amenities.
- Need to establish a solid and enforceable building permit process
- In addition to building permits, the overall management of the county’s zoning process needs to be strengthened and enforced.
- Regarding zoning matters, the county needs to do a better job of disseminating public information about zoning processes to homeowners and developers.
- Similarly, there needs to be an educational process offered to developers and homeowners in regards to the county’s zoning rules and regulations
- Overcoming poor public perception and negative opinions about the livestock and animal confinement industries
- Concern over future development negatively impacting the county’s natural resources, specifically along river corridors and watersheds

Participants were finally asked what they would like to see the **FUTURE VISION** of Sioux County be in 15 to 20 years:

- A continued trend of rural residential development (all development including residential, commercial and industrial)
- An increased demand for future rural infrastructure (i.e. rural water, telecommunications, etc.)
- A projected increase in rural housing and subdivisions
- More people will be drawn to Sioux County in the future because of the county’s progressive development and access to two metropolitan areas (Sioux City and Sioux Falls)
- Expected to see continued population growth and migration growth in Sioux County
- A projected trend of consolidated agricultural services; the size of farms will continue to get larger and the number of farms will continue to decline
- Although the family farm may decline in the future, the sense of family and community in Sioux County will continue to grow and become stronger
- The demand for future social and human service is expected to increase in Sioux County
- The potential for growth in alternative wind energy sources such as wind generation
- With anticipated urban sprawl and fringe development around the cities in Sioux County, the resulting will be a greater number of future annexations of county land into incorporated cities.

In addition to the verbal public input received from the community visioning meeting in Orange City, the residents of Sioux County were also given the opportunity to submit their thoughts, concerns, and compliments regarding the current and future opportunities in written form. Below is a compilation of the written comments received from returned surveys.

STRENGTHS (listed in order of priority)

What are the Current successes or strengths that make Sioux County a great place to live?

1. One of few rural counties that is growing

2. Agricultural is strong
3. Industry is strong and well diversified
4. Education is strong

CHALLENGES (listed in order of priority)

What challenges will Sioux County need to address? What can be improved in Sioux County?

1. Keep youth here – valuable resource
2. Keep diversifying our economy & keep focus on agriculture
3. How to include Hispanic population as a valuable resource

FUTURE VISION (listed in order of priority)

What is the vision that you foresee in Sioux County in the next 15-20 years? What will make Sioux County become a better place to live and work in the future?

1. Enforce zoning
2. Reduce odors
3. Work together with cities to provide ag zones 1-2 miles from city limits
4. Continue to promote industry

GOAL SETTING AND POLICY RECOMMENDATIONS QUESTIONNAIRE

In February 2007, the following land use questionnaire was distributed to each member of the Sioux County Planning Commission to facilitate a discussion relative to and assist the county with goal setting and priorities for future land use policies. The questions asked of the planning commission members below are oriented towards land use issues relative to Sioux County and are intended to formulate opinions on specific land use policies intended to guide and direct future land use growth and development in Sioux County over the next 20 years.

AGRICULTURAL LAND USES

- 1) Past trends show that fewer, but larger farms are occurring in Sioux County. Do you expect this trend to continue?
- 2) How will the transition from family farms to corporate or business farming affect agricultural land uses in the future, if at all?
- 3) How will agricultural land uses be considered in relation to environmentally sensitive or natural resource areas?
- 4) Does agricultural land uses take priority over other land uses or is there a level of review or responsibility of ag planning in relation to rural housing? recreation? commercial/industrial uses?
- 5) What impact will animal confinement facilities have upon the land use composition in Sioux County?
- 6) Without the ability to control agricultural issues through zoning measures, what reason is there to establish land use policies for or against certain types of heavy or intensive agricultural land uses or factory-type confinement facilities?

RESIDENTIAL LAND USES

- 1) Do you foresee residential land uses growing or expanding in the future? Where, specifically, do you foresee residential uses expanding into?
- 2) Do you envision future scattered rural residential users or more clustered residential development occurring near the cities and major transportation routes? Which type of residential development would you like to see occur in Sioux Co.?
- 3) Do foresee any type of multi-family or group home living arrangements occurring in rural portions of Sioux County? Should these uses be kept within city limits?
- 4) Do you foresee any natural characteristics, such as the Big Sioux River valley, or other environmental areas as a draw for future residential housing?
- 5) Will agricultural housing or rural suburban residential housing become the prime force in new housing starts in rural Sioux Co.?
- 6) Will the pricing or value of housing have an affect on new housing starts in Sioux Co.? Is affordable housing an issue within the county?
- 7) How will the County address existing or potential future conflicts between residential uses and intensive agricultural or animal confinement land uses?

COMMERCIAL LAND USES

- 1) How do you foresee commercial land uses occurring in Sioux Co. over the next twenty years? Should commercial development be welcomed and encouraged to expand into rural portions of Sioux County?
- 2) Where, specifically, do you envision commercial development occurring in Sioux Co.? Along major transportation corridors? Along the fringe or boundaries of larger cities?
- 3) Should commercial developments be allowed to locate near or in close proximity to rural residential developments?
- 4) Other concerns, issues, questions regarding commercial land uses?

INDUSTRIAL LAND USES

- 1) Do you foresee industrial land uses growing or expanding in the future?
- 2) Where should industrial development be encouraged to expand into rural portions of Sioux County? Along major transportation corridors? Along the fringe or boundaries of larger cities?
- 3) Should industrial developments be allowed to locate near or in close proximity to rural residential developments?
- 4) Should industrial development be allowed to locate near or in close proximity to environmentally sensitive or natural resource areas?
- 5) Are there any potential concerns or questions regarding the relationship between industrial land uses and heavy agricultural uses or large animal confinement facilities?
- 6) Does Sioux County want to welcome and encourage all types of industrial land uses, regardless of their nature, or should Sioux Co. target specific types of industrial land uses it would prefer such as the bio-technical or bio-research facilities already existing?
- 7) Other concerns, issues, questions regarding industrial land uses?

NATURAL RESOURCE/ENVIRONMENTAL LAND USES

- 1) How will the encouragement or expansion of other land uses affect current natural resource or environmentally sensitive areas?
- 2) Should there be protective measures, such as a buffer zone, against intrusive or heavy land use types in these areas?
- 3) Should Sioux Co. encourage the expansion or creation of new natural resource areas in the future?

PARKS AND RECREATION LAND USES

- 1) Do you foresee recreational land uses growing or expanding in the future?
- 2) Should Sioux Co. offer or entice developments within the county that include a recreational component? (e.g. golf course development, ATV park, hiking/biking trails, fishing ponds, etc.)
- 3) Should Sioux Co. itself take the approach of constructing or developing new recreational land uses for its residents? (e.g. county-wide trail system, support of the Conservation Board and its programs, resources to acquire new recreational properties, etc.)
- 4) Should there be policies established or zoning measures in place to protect recreational areas, including county parks and other private recreational uses from more intensive land uses?

Chapter 5. OVERALL GOALS AND LAND USE OBJECTIVES

Development of a comprehensive plan involving cooperation between diverse interests and various levels of government requires both private and public interests to function with similar concepts in mind. This plan will establish the framework which will enable all interests to operate effectively. It is absolutely essential that involved parties understand each other's roles and responsibilities. Planning is theoretical in nature. There are many different theories advocated, but the general process remains much the same. The following two chapters will detail a series of goals, objectives and land use policies which will reflect the desires and intent of the county. Additional chapters in this plan will provide an overview of existing conditions in the county that will provide the background and supporting data of the goals and objectives.

There are several items the Board of Supervisors and the Planning and Zoning Commission need to remember in order to make this a successful comprehensive plan. The first and foremost is that all participants must realize there is a large commitment and effort required to make the planning process successful. The commitment of the Planning and Zoning Commission to work with county leaders to guide the implementation of this plan and other development issues is essential. This plan is not a "quick fix" to any agricultural, residential, economic or other development challenges that Sioux County may face; however this plan can serve as a guide to future development opportunities. A comprehensive land use plan needs to be modified and updated over time in order to maintain current plan and control ordinances.

OVERALL COMPREHENSIVE PLAN GOALS

1. Sioux County should strive to preserve the separate and distinct characteristics of urban and rural areas while preserving the agricultural character of the county.
2. Sioux County should provide long term guidance through the implementation of appropriate land use controls (e.g. zoning and subdivision regulations), together with managed growth in an effort to minimize and control conflicting land uses.
3. Sioux County should recognize and achieve a progressive balance between land uses to facilitate the economic development potential of the county, while also considering and respecting the rights and responsibilities to preserve prime agricultural lands and natural resources.
4. Sioux County should facilitate the provision of necessary and required county services to its residents, businesses and industries in a reasonable, efficient and fiscally responsible manner.
5. Sioux County, in recognizing current growth patterns and potential future growth of residential and commercial uses, will review and consider those developments which will be beneficial to the overall managed and planned growth of the entire county.
6. Based on past population trends and future projections, Sioux County's population is expected to increase over the next 20 years. Sioux County should welcome new residents by facilitating the development of new and expanding residential development. Although best suited to occur within the cities of Sioux County, residential development should be considered in rural areas when best suited to the environment and market conditions.

7. Sioux County has already established an environment which promotes agricultural, animal pharmaceutical, biotechnical and related industries and should continue to promote economic development efforts in these fields.
8. Sioux County currently maintains a healthy mix of land uses, with a minimum of conflicting land uses. The separation and delineation of existing or potential conflicting land uses will promote a healthier, safer, and more prosperous county.
9. Sioux County should develop and maintain a transportation and infrastructure system that will provide for the safe, convenient and economical movement of people and goods in and out of the county.

These nine (9) long term goals are the most significant element underlying the comprehensive development plan. The land use objectives and the policy recommendations formulated in this plan are intended to achieve these overall goals.

GENERAL LAND USE OBJECTIVES

Physical Setting: Sioux County is characterized by two small urban cities, along with additional prospering communities scattered along Highways 75, 18 and 10. These developed urban centers distinctly contrast with the rural atmosphere in the west central and eastern portions of the county. Thus, land use considerations should be based upon these two separate and distinct environments.

Agricultural Lands: The soils of Sioux County are an extremely valuable and nonrenewable natural resource. This natural resource must be protected, especially the control of soil erosion, soil manipulation, and soil contamination which can influence the depletion of this resource and lead to polluting local and regional water resources. Existing agricultural lands and non-productive lands may be considered for development if they are adjacent to existing built urban areas for the sake of continuity and economic advancement of the county.

Parks & Recreation: Recreation and park areas enhance the quality of life for all those who have access to them. The addition of new recreational areas should be considered, but also examined to determine what affects new park or recreational places will have upon local residents, environment, and social structure of the county.

Natural Resource/Environmental Areas: Natural resources and environmentally sensitive areas including rivers, prairies, and other public access areas require special attention to preserve them. Heavy or intense agricultural uses, industrial uses, commercial uses and even residential uses should be scrutinized before being allowed to locate in or near these areas. If developments are not compatible to the natural area, special consideration or mitigation measures should be implemented in order to provide a cohesive and respectful development.

Residential Development: Provisions for future residential development must be maintained if the county will continue to grow. The county should be careful to consider the needs and services required by existing housing developments. A variety of persons require a variety of living environments; thus, a variety of locations and situations must be expected. Housing growth should be monitored through land use management, zoning and subdivision control measures to ensure that haphazard rural scattered developments do not occur.

Commercial Development: Commercial development should be located adjacent to major arterials where services and products are made readily available to the public. Such areas should be near existing commercial sites and in areas established or designated for commercial expansion. Commercial activity of a “home occupation” nature should be allowed in both agricultural and residential zoning districts as long as given conditions are met by the home occupation.

Industrial Development: The economic base of a county is strengthened and expanded by the variety of industries which it contains. Expansion of industrial land uses should occur within existing corporate limits or in planned industrial parks where necessary services and utilities can be provided with a minimum of expense and maximum efficiency. Hazardous materials uses (i.e. farm or agricultural chemicals) along with those industries promoting renewable energies or alternative fuels should be considered upon careful review and consideration to locate in agricultural areas where zoning protection can be implemented to keep residential uses at a safe distance. Any industrial development should be reviewed in regards to its impact upon the surrounding environment.

Transportation/Infrastructure: Improvements to the county’s transportation and infrastructure systems is one of the primary components to developing a sound economic base. To ensure the best use of county funds all roads should be regularly maintained, but critical collector and arterial routes should be monitored, maintained and replaced as necessary.

Utilities: Necessary services, such as fire protection, water, sewer, electricity, natural gas, propane, or petroleum greatly enhance the living environment and economic potential of an area. Because of the cost of providing such services, uses should be encouraged to locate where adequate services are present. If existing utilities are not available, private systems should be carefully reviewed in regards to their impact upon the environment prior to approval of county officials.

County Development: Overall development of the county must not become stagnant. At a minimum, existing businesses and housing should be maintained and encouraged to expand. One primary objective for countywide development involves focus on increasing the county’s existing tax base through the promotion of new opportunities.

City Development: City growth in Sioux County must be encouraged in order to strengthen the overall economic vitality. Although, the county will encourage cities’ growth trends toward infill development within existing city limits. The county should carefully review future annexation proposals of unincorporated areas in Sioux County. Growth within the cities makes the most efficient use of available capital resources and community facilities.

Government Role: The primary goal of the governing body is to ensure the best interests of the county’s population are protected and advanced. The governing body must be as consistent as possible to ensure all residents and landowners are treated fairly.

Land Use Mixing: Zoning practices should allow a separation of land use types in order to give all uses protection from incompatible types. Some degree of mixing may be acceptable and even encouraged in instances where multiple land uses are beneficial for the overall development and the properties it affects.

Planning and Implementation: Citizen input is one of the most vital planning assets the county has. Thus, every effort should be made to implement the ideas contained in this plan. Continued public input and citizen recommendations should be heard and considered by the county.

Chapter 6. LAND USES & POLICY RECOMMENDATIONS

Sioux County continues to be characterized by two distinct land use patterns: concentrated urban growth around the fringe of developing small urban cities and vast rural areas elsewhere in the county. From 1990 to 2000, land usage patterns in both areas grew more pronounced. The urban development was built up further with more farmland taken out of production for residential and industrial uses. In the rural portions of the county the agricultural trends continue to hasten the movement toward larger farm corporations and fewer family farmsteads.

Land use policies deal with specific issues or areas and delineate a course of action to address existing or potential future growth and development. Policies are directly related to the county's overall goals and objectives but are more specific in addressing particular elements or land use types. Policies are meant to be an aid in assisting implementing bodies in revising future land uses in the form of sound and intelligent decisions. The land use configuration of Sioux County identifies and reflects the personality of the county. The use of the land is related to factors including past trends, socioeconomic characteristics, soil suitability, topography, availability of utilities, transportation and the local nature and beliefs of its residents. Upon determination of prevailing land use patterns, analysis may be conducted showing trends of the past, influential factors and likely use of the land in the future. Once this information has been gathered, analyzed and quantified, it can be linked with future land use goals and objectives and the suitability of future growth areas to facilitate the evolution of a realistic, attainable and viable land use plan.

This study of planning in Sioux County will include an analysis of several different land uses found within the county's jurisdiction. Land use considerations are probably the most important aspect of comprehensive planning, as far as shaping the future growth and development of the county. Decisions made today tend to be long term, affecting future growth decisions for many years. The ideal land use pattern is to have a separation of land use types so one type of use is offered the same zoning and development protection experienced by all of the other types.

LAND USE DEFINITIONS

According to *"The New Illustrated Book of Development Definitions"* a "Comprehensive Plan" or "Master Plan" is defined as,

"A Comprehensive, long range plan intended to guide the growth and development of a community or region (e.g. county) that typically includes an inventory and analytic sections leading to recommendations for the community's future economic development, housing, recreation and open space, transportation, community facilities, and land use, all related to the goals and objectives for these elements."

<u>Agricultural</u> -	Land in the county being utilized for crop production, the raising and/or production of livestock, and/or other agricultural-based commodities.
<u>Rural Residential & Unincorporated Towns</u> -	Residential structures, typically single family housing units, located in unincorporated subdivisions, acreages or farmsteads.
<u>Single Family Residential</u> -	Structures occupied for dwelling purposes by a single-family living in one dwelling unit.

<u>Commercial</u> -	Structures and/or land used primarily for services, trade, and commerce such as retail, entertainment, food, and other businesses providing the sale of goods, products, and services; excluding wholesale and manufacturing.
<u>Industrial</u> -	Structures and/or land used primarily for the manufacturing, packaging warehousing, or distribution of natural or man-made products.
<u>Public/Civic</u> -	Structures and/or land available for use by the general public for non-commercial purposes such as schools, churches, cemeteries, fraternal or social clubs, and government buildings.
<u>Parks & Recreation</u> -	Public and/or private areas devoted to active or passive recreation activities
<u>Natural Resource/ and Conservation</u> -	Those public and/or private areas devoted to the protection, preservation, sustainability of the natural resources and native land uses of the county.

Often times, similar classifications are used within the County Zoning Ordinance. Zoning classifications should not be confused with the categories listed herein, as these are more general in nature and probable uses of the land are derived only from the appearance of a given land use or property. These categories are meant only to aid in studying the make-up of the county's current and proposed development patterns.

LAND USE CHARACTERISTICS/GROWTH TRENDS

Urban sprawl trends should receive significant consideration in regards to the planning of growth, development, and future land uses. Land use control measures should be explored and recommended by participating cities, even considering a shared or common set of urban sprawl control measures. The information presented throughout the rest of this chapter should provide a sound basis from which the county's land use goals, objectives, and policies can be developed.

The exact amount of land to be devoted to each land use in 2030 is not known and cannot be accurately estimated because of unknown variables; rather, a realistic estimate of land areas will be made relative to the following methodology. First the increase in projected population from 2000 to 2030 will be examined and analyzed to determine the impact on existing and future planned land uses. Secondly, land use areas or districts will be indicated on the future land use map. It must be kept in mind that the future land use plan is a valuable tool in which development decisions and zoning controls can and should be based.

AGRICULTURAL LAND USE

Agricultural uses occur in Sioux County where land is used to produce row crops, grazing, pasture, raising or confine livestock, support orchards or farming, or store grain or agricultural products on a small scale. Furthermore, the agricultural land use classification also includes non-farmed lands that are currently vacant and do not maintain an existing use.

While the number of farmsteads is diminishing, the average size of the farm along with the number of acres farmed in Sioux County is increasing. The continual decline of the farm numbers may be attributed to higher production costs and a competitive market created by larger farms that have a much lower cost of operation and overhead. Although the small farm operation

has tried to survive in Sioux County, and in some respects has flourished locally, the increasingly agricultural market in the 21st century has made it difficult for smaller farm operations to continue.

Photo of Agricultural Land Use



By far, agriculture accounts for the greatest amount of land uses in Sioux County, accounting for more than 500,000 acres. Additionally, the agricultural economy remains one of the county's strongest economic resources. The economic impact derived from agricultural products and farming will continue to evolve, but will also continue to have a strong presence in Sioux County for generations to come. Local officials need to look toward implementing protection measures

of prime agricultural land from prospective development and unnecessary urban sprawl. Prime agricultural land is one of Sioux County's and Iowa's greatest single natural resources and as such should receive consideration for preservation. Prime agricultural areas of the county should remain such. Protection of agricultural areas can help maintain agriculture's status as the dominant economic activity in the unincorporated areas.

To further guide considerations of agricultural lands and development related to agricultural uses the following ***residential land use objectives and policy recommendations*** have been adopted

Objective 1. Protect prime agricultural lands within Sioux County.

Policy 1a. Encourage the continuation and promotion of farming activities in Sioux County.

Policy 1b. Since prime agricultural soils are not a renewable resource, encourage all farming and agricultural land uses in Sioux County to become "good stewards" of the land and practice environmentally friendly and conservation practices.

Policy 1c. Any new development (e.g. residential, industrial, etc.) should be reviewed and critiqued as to its impact on prime agricultural soils, but also in consideration of and in relation to the overall economic development of Sioux County.

Objective 2. Support Iowa legislation in regards to zoning control over agricultural uses.

Policy 2a. In the event that Iowa law would support changes to zoning of agricultural uses, Sioux County should seek to obtain input and public comment regarding local agricultural zoning measures.

Policy 2b. Any potential or future zoning issues related to agricultural lands should address the protection of prime areas from encroachment of heavy development or intensive land uses incompatible with agricultural uses, but in consideration of and in relation to the overall economic development of Sioux County.

Objective 3. Protect agricultural uses and farms from detrimental environmental animal waste and industrial waste.

Policy 3a. Animal waste and/or agricultural waste generated from confinement or open lot facilities should be reviewed for potential future detrimental effects upon the environment.

Policy 3b. Encourage state and federal agencies (e.g. IDNR, EPA, etc.) to enforce regulatory cleanup of spills from animal, agricultural or industrial waste into waterways or environmentally sensitive areas.

RESIDENTIAL LAND USE

Residential land use is that which is used primarily for human habitation. For purposes of this plan, this will include both single family and multiple family residential uses; and includes all residential uses from small single family lots to large estate lots or rural residential acreages. There is no identified multi-family housing within rural Sioux County, aside from the county home which was determined to be a public land use. Rural residential development in Sioux County has experienced significant growth over the past ten years and is expected to see continued future growth. The county has experienced an increasing trend of “city dwellers” wanting to construct new homes on rural lots or acreages where they feel like they can escape the city traffic and congestion.

Photo of Residential Housing



While the trend for farm residences and agricultural housing to decline the trend for non-farm residences in rural areas is significantly increasing. This has become especially evident near the perimeters of the larger communities. Although the Big Sioux River corridor and its county parks situated along the river have not yet experienced an escalation in rural residential construction, this area of Sioux County could become the next “hot spot” in rural residential development. It is expected that this practice will continue in the future with smaller groupings of large estate lots or acreages being developed even further away and isolated from cities. People today want the convenience of living a rural quiet life but within a close commute to their work. Sioux County should encourage residential development to locate within or adjacent to the existing communities. However if development does occur the county needs to carefully plan and execute the greatest possible benefit to the county without negatively impacting prime agricultural land uses. Residential development along the Big Sioux, Rock or Floyd River corridors also need to be monitored as to mitigate any negative environmental impact to the surrounding area.

Realization of residential development by the types and areas proposed can be achieved though the use of regulatory measures such as zoning and subdivision ordinances. Zoning will delineate residential areas by type and density controls, and should reflect the policies of the land use plan to direct development accordingly. Subdivision regulations regulate the layout of subdivisions, lot

sizes, infrastructure, etc., and require all proposals to conform to the plan. Encroachment from non-residential incompatible land uses must be resisted.

Areas suited for residential development are those areas adjacent to existing developed subdivisions along with areas physically suited for such development. Residential growth will also occur at the outer fringes of growth areas and in widely scattered sites in rural areas.

To further guide residential development the following ***residential land use objectives and policy recommendations*** have been adopted.

Objective 4. Provide a diverse choice of housing types and locations to serve the residential needs of the present and future population.

Policy 4a. Support the development of new and available housing units to facilitate changes in the population structure.

Policy 4b. Explore innovative approaches to improve and strengthen the county's housing base.

Objective 5. Promote the rehabilitation or removal of unsafe or dilapidated housing structures in Sioux County.

Policy 5a. Encourage the reduction in the number of dilapidated or unsafe housing units in the county.

Policy 5b. Address unsafe or uninhabitable farmsteads and abandoned housing units within the county.

Objective 6. The county should address density issues or requirements of future single family rural residential properties.

Policy 6a. The county should promote new non-farm single family residential development to occur on previously disturbed or built upon land, or existing or abandoned farmsteads.

Policy 6b. New non-farm single family residential properties should be scrutinized from taking prime agricultural lands out of production for development.

Policy 6c. The county should establish density requirements in regards to the number of non-farm single family residential housing units permitted per section of land.

Policy 6d. New non-farm single family residential properties should be encouraged to locate on hard surfaced roads and within proximity to cities, unincorporated towns or existing rural subdivisions.

RURAL RESIDENTIAL SUBDIVISIONS/UNINCORPORATED TOWNS

Although rural residential housing and acreages have seen an insurgence in recent years in Sioux County, rural subdivisions have not grown as fast. There are several established rural residential subdivisions which have experienced recent new housing units; however, most of these subdivisions were platted 10-20 years ago. Recent developments in Sioux County such as a new golf course on the southern edge of Sioux Center, recent completion of the Highway 60 expressway and continued growth in countywide population may lead to a real potential for future rural subdivisions. One

downside to large scale rural subdivisions is that the draw from “city dwellers” also brings with it expectations from homeowners of services such as water, sewer, solid waste collection and police and fire protection similar to what they received when living in a city. With the continued expansion of four rural water systems in Sioux County, rural residential development has become easier to accommodate with services similar to that of a municipality.

Another form of rural residential land use includes those persons residing within the unincorporated communities of Perkins, Carmel, Lebanon, Newkirk, Middleburg, Carnes and McNally. Typically older and affordable housing alternatives are located within unincorporated towns. These small communities are scattered across Sioux County. Living in an unincorporated town often times presents an affordable alternative to those who want to feel as if they are living in the country yet want to maintain a neighborhood atmosphere.

To further guide rural residential and unincorporated town development the following ***rural residential land use objectives and policy recommendations*** have been adopted.

Objective 7. Support Sioux County’s unincorporated towns, and permit rural residential subdivisions upon review of projected use and impact to the surrounding environment.

Policy 7a. Continue to offer those basic yet essential county services to residents of the seven unincorporated towns in Sioux County.

Policy 7b. Encourage new housing development; however, rural residential development or rural subdivisions should be reviewed and scrutinized for its impact to the surrounding agricultural environment and natural resource, but in consideration of and in relation to the overall economic development of Sioux County.

COMMERCIAL LAND USE

Although commercial uses comprise one of the smallest land use categories in rural Sioux County, these businesses remain important to the economy and continued success and growth of the county. Most commercial needs are met through businesses located within one of the twelve cities in Sioux County. When possible, commercial activities should be encouraged to locate within the cities where infrastructure, services, and a customer base are readily available to serve these businesses. There are instances where certain businesses such as a farm implement or salvage yard dictates that it is better suited in a rural setting. Over the years, the U.S. Highways 18 and 75 and Iowa Highways 10 and 60 corridors serving as the principal arterial routes through the county have become the catalyst to developing a number of retail and commercial uses. Additional scattered commercial uses across the county are typically service or agricultural support type businesses.

The largest concentration of commercial land uses in Sioux County is comprised of a cluster of commercial businesses located east of Rock Valley along Highway 18, as well as a cluster of businesses located at the junction of Highways 18 and 75, otherwise known as the “Perkins corner.” If commercial uses are to be further promoted and developed in Sioux County, the locations of planned commercial properties should be carefully considered as to not infringe upon prime agricultural land. Property along the fringe of cities as well as highly visible locations along major transportation routes will likely be the targeted areas for future commercial land uses. In all respects, commercial uses should receive the same protection from incompatible land uses, as one would expect for a residential district. In other words, if residential developments are encroaching toward a

commercial development, then appropriate measures should be taken to ensure that adequate buffers are required to dampen the sound and visual distraction. Spot or strip commercial development should be discouraged in the unincorporated part of the county. These actions will result in less traffic congestion on the county's major highways; help preserve the area's character; and result in lower costs for infrastructure.

To further guide future commercial and retail developments, the following **commercial land use objectives and policy recommendations** have been adopted.

Objective 8. Improve and increase commercial trade countywide.

Policy 8a. Consider the long term development patterns of commercial uses near cities and along major transportation routes. Determine if commercial/retail development is appropriate in these areas and promote that development.

Policy 8b. Create and enforce sign regulations to stipulate the allowance and maintenance of commercial/business signs in Sioux County. The county should consider size, height and types of existing and future signs.

Policy 8c. Support the efforts of the local municipal chambers of commerce in Sioux County which strive to improve the commercial/retail climate of the entire county.

Objective 9. Strive to promote and retain agricultural based businesses and ag-related support businesses in Sioux County.

Policy 9a. Promote and encourage responsible businesses that will not impede upon the environment or quality of life in Sioux County, while at the same time promoting the overall economic growth of the county.

Policy 9b. Continue efforts to diversify local businesses and promote agricultural related establishments to create a solid business network in Sioux County.

INDUSTRIAL LAND USES

The majority of Sioux County's traditional manufacturing, warehousing, distribution and assembly industries are located within designated industrial parks in Orange City, Alton, Sioux Center, Hull, Boyden, Hawarden and Rock Valley. When possible, these industries should be encouraged to locate within the corporate limits of cities where basic and adequate utilities and services are more readily and available to industries. However, due to limited undeveloped space in some cities, this is not always an option. Also, those industries such as agricultural related business which may rely on the agricultural market

Photo of Hematech/Trans Ova Genetics Plant north of Sioux Center



Photo courtesy of: <http://www.hematech.com/Company/About.cfm>

or deal with hazardous products should be encouraged to locate within the county away from concentrated residential areas where there is easy access to rail, highway, and close to agricultural markets.

Sioux County's industrial sector contains a healthy mix of agricultural and high tech animal science and biotechnical industries. Sioux County is unique in the sense that it has created an environment within the county which promotes and supports a number of animal pharmaceutical, animal science, research and biotechnical industries which diversifies and creates a healthy economic market. In fact, several industries being created today are due in part to the support and complimentary nature of the existing high tech industries in Sioux County. Another expanding market to Sioux County is the alternative fuel, energy and renewable resources industries. Ethanol, soy biodiesel, wind generation, and other renewable resource industries will become increasingly important to the continued growth and success of the local, regional and state's economy. These industries should be encouraged to locate within the county. Future industrial land uses is a difficult variable to plan for due to the many factors governing location, available land, transportation access, work force, availability of utilities and services, etc.

Common industrial uses fall under one or more of the following industry types: basic industry, custom manufacturing, resource extraction, salvage, warehousing, distribution, research and biotechnical. When an industry does locate in the rural portion of Sioux County, it should not be planned in areas of prime agricultural uses. Locations adjacent to landforms or areas of poor corn suitability rating or poor soil conditions may be better suited for development of industries. As shown on the land use map, industrial developments are forming around the fringe of the larger communities and along the major highway corridors in Sioux County.

To support regional industrial developments, the following ***industrial land use objective and policy recommendations*** have been adopted.

Objective 10. Support economic development efforts to promote industrial job creation or retention.

Policy 10a. Increase the number and quality jobs available to residents of Sioux County, who are qualified and desire industrial or manufacturing employment.

Policy 10b. Support the cities of Sioux County through collaborative efforts to attract and retain industrial/manufacturing based employment.

Policy 10c. Support local and regional economic development groups in their efforts toward business and employment recruitment to the region.

Objective 11. Encourage the increased development of high tech, biotechnical, research and alternative energy industries in Sioux County.

Policy 11a. Continued diversification of the industrial market will strengthen and create a biotechnical industry cluster, which will be utilized to promote continued growth of the county's economy.

Policy 11b. Utilize economic development incentives needed to recruit and support biotechnical industries, which in turn creates good paying jobs for Sioux County residents.

CIVIC/PUBLIC LAND USE

Civic and public land uses include those properties including public or private utility or infrastructure systems, educational, religious, cultural, medical, protective, governmental, and other uses which tend to be strongly vested with public/social importance. Civic and public land uses usually bring a relatively light intensity to neighboring properties and have the flexibility to be scattered across many zoning districts. These uses are largely benign in their impact on surrounding properties, thus the scattered pattern of public uses is appropriate. Public or private utilities must be careful not to construct facilities or place facilities, building or equipment in areas of significant residential growth. Increased traffic and congestion at predictable times is often associated with uses such as churches or other public properties. While periodic increases in traffic are often acceptable, congestion and safety issues should be addressed in the development of future public/civic uses. Examples of public/civic uses in Sioux County include the Sioux Center and Hawarden municipal airports, wastewater treatment plants or lagoons, and the Sioux County Public Safety Complex located northwest of Orange City.

To support cultural, civic, governmental, and public land use developments, the following *civic and public land use objectives and policy recommendations* have been adopted.

Objective 12. Continue to provide safe, efficient, and cost effective county services and utilities to the residents of Sioux County.

Policy 12a. Efficiently and fairly provide quality public services to all residents, including new residents and businesses.

Policy 12b. Seek financial resources to provide capital to implement the provision, maintenance, or repair of public utilities and services.

Policy 12c. Enter into agreements with local communities or adjacent counties where it is shown that together more efficient and effective services can be provided.

Objective 13. Take measures to promote a clean, inviting and aesthetically pleasing county.

Policy 13a. Residents, businesses, and county employees all need to educate, inform and take measures to promote a welcoming environment in Sioux County.

Policy 13b. The county should continue supporting and promoting volunteerism and pride.

Policy 13c. Promote Sioux County's unique and strong cultural and heritage ties. This will help the residents to create a sense of ownership and roots within the county.

PARKS AND RECREATIONAL LAND USE

Recreational land uses include parks, golf courses, and other county or state owned recreational lands. These uses provide many benefits and amenities to quality of life. In order to present an attractive and beautiful setting for residents to live in and guests to visit, it must have a sound system of parks and a variety of recreational activities. Local officials and policy makers should keep in mind that both current and future parks and recreational land uses will continue to be an important factor in future land use decisions and planned growth of the county. The appeal of attractive open space and recreational opportunities, especially targeted for youth and family entertainment and recreation, is often overlooked as an important factor in the decisions of families, businesses, and

industries to locate in a particular county or community. Also, Sioux County cannot overlook the community and economic development stimulus it receives from the thousands of persons entering the county to enjoy and participate in county and state parks and other outdoor recreation activities.

Although Sioux County maintains a viable parks and recreational system, these “green” amenities cannot afford to remain static. As the composition of the county changes over time, so must recreation systems change to meet future demand. Basic planning standards suggest recreational land uses comprise 1.5 acres per 100 population. Based on the county’s 2005 census population of 32,277, standards would suggest a recommended total acreage of parks and recreational amenities in Sioux County should equal 484 acres. In reality, there is 1,415 acres of identified county and state parks, recreation and natural resource uses in Sioux County, with the largest of these facilities being Rock River Access at 277

Photo of Otter Creek Park north of Bowden



Photo courtesy of: <http://siouxcountysportsmensclub.org>

acres, located 1 mile northeast of Rock Valley. According to the previously identified standard for the number of recreational acres per person, Sioux County should be able to accommodate park and recreational needs for a population base of 94,300. Even if you withdraw the public natural resource and open space areas from the total amount of acreage and just look at the county parks, these properties still account for 501 acres, which still exceeds the county’s recommended standard for the current population. The largest active recreational park in Sioux County is Big Sioux Park at 240 acres, located 3 miles north of Hawarden along the Big Sioux River. Future park and recreation improvements or expansions will only enhance the beautiful parks in place today.

To guide the use and development of parks and recreational facilities in Sioux County, the following ***parks and recreation land use objectives and policy recommendations*** have been adopted.

Objective 14. Support the maintenance and upkeep of the county’s quality parks and recreational uses.

Policy 14a. Appearance often leaves a first impression; continue to maintain a neat and orderly appearance to the county’s parks and public spaces.

Policy 14b. Develop, fund, and implement an annual maintenance program aimed at enhancing county park and recreation uses.

Objective 15. Take measures to address unmet recreational needs of Sioux County.

Policy 15a. Create a task force including local youth to explore potential recreational uses for teens and the youth of Sioux County; consider completing a feasibility study or county survey regarding potential needs and desires.

Policy 15c. Offer support to those activities undertaken by other municipal, county or state governments which are comprehensive and regional in nature, but beneficial to Sioux County’s residents.

NATURAL RESOURCE/OPEN SPACE LAND USES

In addition to the parks and recreational activities within Sioux County, there are many passive recreational and natural resource amenities. One of the county's largest series of publicly owned tracts of land is located just to the west and northeast of Rock Valley which follows the Rock River corridor. The Rock Wildlife Area, Rock River Access and Rock River-Abma Tract offer a combined 704 acres of public wildlife, river bottom, timber, uplands and open space. Not only do these natural resource areas provide opportunities for passive activities such as walking, hiking, birdwatching, or places for pets to run; they also serve a number of environmental benefits. Natural resource areas filter and capture excess water runoff in addition to absorbing much of the excess storm water shed from surrounding developed land.

Photo of Rock River Access near Rock Valley



Photo courtesy of: <http://siouxcountysportsmensclub.org/>

Development occurring in or near natural resource or environmentally sensitive areas, including the previously mentioned public areas or land included in any floodplains in Sioux County should be met with a heightened level of review resulting in a determination of impact to the natural environment based upon the proposed development. Any development in or adjacent to these areas, if allowed, should be minimal in its impact to the environment and should be of a minimal density with consideration given to watershed impact, drainage, and utilities. Any type of commercial, industrial or high-density residential projects should be discouraged from locating in or adjacent to natural resource or environmentally sensitive areas.

To guide the use, protection and preservation of natural resource and open space areas, the following *natural resources land use objectives and policy recommendations* have been adopted.

Objective 16. Promote the most effective utilization of existing natural resource and open space areas

Policy 16a. Areas with unique topography, trees, water or other natural features should receive priority for protection from development. Unique natural features within a development should be designated as future park areas or used as open space.

Policy 16b. If natural resource areas are included within a proposed development, they may be used as green space buffers between land uses.

Objective 17. Promote and encourage environmentally friendly development in Sioux County.

Policy 17a. Promote low impact development measures on new large scale residential, commercial or industrial projects to encourage the limitation of excess storm water runoff with potential contaminants into local waterways or drainage tiles.

Policy 17b. Consider alternative development proposals such as conservation development when planning future residential or commercial subdivisions. Conservation Development promotes utilizing compact design with environmentally conscious open space design standards.

TRANSPORTATION AND INFRASTRUCTURE

A well planned and designed transportation system is essential to the overall development of a county and its incorporated cities. It is not expected that new major arterial lines of transportation will be added, but existing modes must be continually updated and improved. Development of a new airport within Sioux County is being planned and recognized as a viable alternative to the limited uses and functionality of the Sioux Center and Orange City municipal airports. Over the next five years, the county is addressing a proactive road maintenance and bridge/culvert replacement and maintenance program in order to improve the transportation efficiency and road conditions in Sioux County.

To support transportation and infrastructure land uses, the following *transportation land use objectives and policy recommendations* have been adopted.

Objective 18. Continue to monitor and improve the condition, safety and adequacy of Sioux County's roads and transportation corridors.

Policy 18a. The county should continue its efforts to maintain a viable and safe rural transportation system including hard surfaced roads, farm to market routes and secondary roads.

Policy 18b. Review the design and use of heavily utilized roads and highways to determine if they are adequate for projected future demand.

Policy 18c. Prioritize the list of roads and infrastructure projects; then adopt a yearly schedule for maintenance and repairs.

Objective 19. Support alternative transportation modes.

Policy 19a. County leaders should continue to work with city officials to continue progress in providing new and substantially improved air transportation services to the residents of Sioux County.

Policy 19b. Increase the awareness of local citizens and visitors to Sioux County as to the services provided by "RIDES"; the Regional Transit Authority.

FUTURE LAND USES

Determining land uses for a specific area is a product of many factors. Land use determinants include such things as public interest, social values, human behavior, economy, convenience, physical characteristics, and the political climate. The problem in identifying the causes of land use patterns becomes even more complex as efforts are made to project and plan for future land uses. The unpredictability of how various interrelated land use determinants will affect each other, combined with an effort to control and plan future development based on these very factors, necessitates a combination of objectivity and subjectivity.

The future land use plan is not a legal document like a zoning ordinance, but rather is a philosophy of future growth within the unincorporated areas of the county. The future land use plan and map then becomes the guide in determining whether future zoning change requests should be approved or denied. Because this is a long range plan based upon projections to the year 2030, many changes may become necessary due to unforeseen criteria. To deal with the land use planning process most

effectively the county has generated a framework of goals and objectives upon which land use decisions are to be based. Furthermore, other variables including planned expansion of services or potential economic recruitment also provides insight into future land use patterns. One important factor to consider is that land use planning is not static. This is an ongoing process, and henceforth should be subject to continuous updating and change according to variations in land uses. The extent of future growth experienced in Sioux County will play a major role in determining how often and what extent of adjustment or change will be necessary to updating the comprehensive plan. The Zoning Administrative Officer, members of the Planning and Zoning Commission and members of the Board of Adjustment have very important responsibilities. It is imperative these individuals are conscientious of the county's best interest and tend not to be single interest oriented.

The following **General Land Use Objective** has been adopted and should be followed when considering future land use planning or land development.

Objective 20. Promote and establish future land use patterns that will maximize the health, safety and welfare of the residents of Sioux County.

Policy 20a. Preserve existing and proposed land use patterns through the implementation and enforcement of the county's zoning ordinance and subdivision controls.

Policy 20b. Encourage government officials and local leaders to collaborate and foster unique, distinctive and attractive development standards, while also considering fair and cost effective development practices.

LAND USE MAP

Sioux County's land use map, to the best that can be determined, was last created or modified for purposes of the 1972 Comprehensive Plan. Since that time a new land use map has not been created, and a comprehensive look at both existing and potential future land use trends in Sioux County has not occurred in more than 30 years.

The Sioux County future land use map has been created with the assistance of the Northwest Iowa Planning and Development Commission staff. The land use map was created by completing a survey of the entire county. Aerial photography and county assessment data was also utilized in verifying existing land uses. The survey and related data was then transferred to the map and checked by local officials and members of the Planning and Zoning Commission prior to adoption of the map. The information presented on the land use map has been color coded according to standard land use procedures indicating the following general categories of land use: agricultural, residential, commercial, industrial, civic/public, open space/natural resources, and parks and recreation. For purposes of mapping, the lots were coded with regards to the primary use or intent of the land. Finally, when creating the land use map, the county has followed existing land use patterns to also predict and plan for future land uses within Sioux County. In other words, most planned residential and commercial growth is expected to occur within or near the fringe of the incorporated cities in Sioux County. This is a logical location because the progression of growth activity is likely to occur within these areas.

Insert Future Land Use Map

Chapter 7. ADDITIONAL DEVELOPMENT ISSUES

ANNEXATION

Annexation is the process through which contiguous fringe territory is added to an existing municipality. Laws that regulate annexation vary greatly from state to state, necessitating a brief narrative of the procedures as they relate to Iowa. Annexation usually is not a simple process, but rather one that requires considerable thought and consideration as to benefits and cost requirements prior to an official act. Once a parcel of land has been annexed, the resulting economic, physical, and cultural results will be evident for many years. Annexation may become further complicated by recommendations developed by the legislature based upon input by land use preservation groups and those opposing urban sprawl trends. Cities, as well as county governments, must be kept abreast of current legislative proposals as they relate to annexation. Growing counties often find themselves in situations where large parcels of developing land adjacent to a city's corporate boundaries is constantly under threat of being annexed. In Iowa, a city may annex land by one of five (5) methods:

1. Voluntary annexation not in an Urbanized Area
2. Voluntary annexation in an Urbanized Area
3. "80/20" voluntary annexation not in an Urbanized Area
4. "80/20" voluntary annexation in an Urbanized Area
5. Involuntary annexation.

The City Development Board oversees the annexation process in Iowa. This board is comprised of community officials and representatives from across the state operating under the direction of the Iowa Department of Economic Development and has been granted authority by the State of Iowa to review and make recommendation on annexation proposals.

Voluntary Annexations

Voluntary annexation is a relatively simple process that is handled at the local level between the city and property owner(s) requesting annexation. Regarding those voluntary annexations in an urbanized area, state involvement is limited to a review by the City Development Board as to the completeness of the annexation petition. As the name would imply, voluntary annexations have 100% support from the landowners requesting annexation into the city. Voluntary annexations, when in the best interest of the city and in keeping with the land use policies established herein, should be welcomed by the city. The resulting increase of tax base and future development potential generally translates to positive outcomes for communities.

Table 1 - *Voluntary Annexation Procedures*

- a) Submit application for voluntary annexation
- b) The city shall provide a copy of the application to the Board of Supervisors.
- c) The city publishes a notice in an official newspaper and city council approves the annexation by resolution.
- d) The city files a copy of the resolution, map and legal description of the annexed land with Secretary of State, Board of Supervisors, public utilities, and Iowa DOT
- e) Records a copy of the legal description, map, and resolution with the County Recorder.
- f) The annexation is complete upon acknowledgment by the Secretary of State.

Additionally, those voluntary annexations which adjoin or are within two miles of another city must:

- Provide notice of the application to cities whose boundaries adjoin the land or that are within two miles of the territory, each affected public utility, the Board of Supervisors, and the regional planning authority.
- Upon approving the annexation by resolution, the city forwards the proposal to the City Development Board.
- City Development Board considers the annexation proposal and approves or denies the proposal by a written ruling.
- If the annexation is approved and no appeal is filed within 30 days, the Board files and records documents.

"80/20" Voluntary Annexations

The primary difference between a voluntary annexation and an "80/20" annexation is that a city may include up to 20 percent of the total land area to be annexed containing land owners not wanting to annex into the community, as long as the remaining 80 percent voluntarily agree to the annexation. Also, public land may be included in 80/20 annexations regardless of written consent. If a public land owner does not consent, the public land does not affect the 80/20 ratio calculation. The City Development Board may request if city services are provided to residents in the annexed area.

Table 2 - ***"80/20" Voluntary Annexation Procedures***

- a) A city can include up to 20% of land without consent of the owner to avoid creating islands or square up boundaries.
- b) City holds a consultation with the Supervisors and Township Trustees at least 14 business days prior to application.
- c) At least 14 business days prior to any action, the city shall by certified mail provide a copy of the application to the non-consenting property owners and each affected public utility.
- d) The City must hold a public hearing on the application before taking official action.
- e) At least 14 days prior to any action, the city shall provide notice of application and public hearing to the Supervisors, non-consenting owners, owners of property that adjoins the territory, and public utilities that serve the territory.
- f) The City Development Board considers the annexation proposal. If the application is accepted, a public hearing is set.
- g) The City Development Board holds a public hearing for the county and property owners. After hearing all evidence the Board decides whether to approve or deny the annexation.
- h) If the annexation is approved, the Board notifies the parties and 30 days following the notification the Board files and records documents to complete the annexation if no appeal is filed.
- i) If the annexation is denied the Board notifies the parties.

Involuntary Annexations

Involuntary Annexations are initiated by the city and are opposed by the majority of landowners in the proposed annexation areas. Before a city attempts such a process, they should review Chapter 368 *Code of Iowa*, as amended and the most recent City Development Board Administrative Rules appearing in the *Iowa Administrative Code*. Furthermore, contacting the City Development Board to review and provide necessary coordination and advice on proceeding with the annexation should be also considered. Involuntary annexations can easily become a complex legal matter; thus, care should be given to assure that all requirements of the City Development Board are met. The city must be prepared to defend its actions by indicating how and when community facilities, services, and utilities can be extended into the proposed annexation. Once approved by the board, involuntary annexations must also be approved by a simple majority of the residents of the proposed annexation area and the residents of the city in a referendum vote. A city may be able to justify involuntary annexations based on the best interest of the public when, for example, adequate land area for a particular land use is not immediately available within the current city limits potentially causing the city to miss out on the creation of jobs or provision of expanded services for residents or businesses.

Petitions requesting involuntary annexations must indicate how municipal services will be provided by the city to the annexed area within three years of July 1 of the fiscal year in which the city taxes are collected against property in the annexed territory. At the end of the third year, the city must submit a report to the City Development Board describing the status of the provision of services within the annexed territory. If the city fails to provide services or fails to show progress in providing services, the City Development Board has the power to cut ties between the city and all or part of the annexed territory. If good cause is shown, the city may request an additional three years to provide municipal services.

Table 3- *Involuntary Annexation Procedures*

- a) Notice of intent
- b) Prior to filing a petition, a letter of intent must be sent to each city whose urbanized area contains a portion of the land, the regional planning authority, affected public utilities, property owners listed in the petition, and the Supervisors.
- c) Prior to filing, the city must hold a public meeting on the petition, of which a notice is to be published.
- d) The city files a petition with the City Development Board
- e) Board reviews petition for completeness and proper filing. If accepted as complete, a committee is formed.
- f) A committee holds a public hearing to hear evidence for and against the petition.
- g) The Committee holds a decision meeting to approve or deny the petition for annexation.
- h) The Board works with the county to set an election date. The Board publishes the election results.
- i) If the petition is approved at election, and no appeal is filed within 30 days of the publication of the election results, the Board files and records the documents necessary to complete the election.
- j) Three years following the completion of involuntary annexation, the Board reviews the status of the provision of services provided by the city to the annexed territory, and determines if further action is required.

Future growth of the cities in Sioux County is inevitable, and county officials should realize this trend will continue. Growth and annexation of land in Sioux County from the cities is expected to occur. Also, proposed future development and potential annexations could be expected along Highways 75, 60, 18 and 10 if development continues to progress along these routes.

In summary, when considering the impact future annexations will have upon the county at large, it is evident there is a need for county officials to clearly understand and review all proposed future annexations. The county should review, but approve voluntary annexations in most cases. After all, these landowners are not only willing but also wanting to become a part of a municipality. Regarding attempts from cities to initiate involuntary annexations, Sioux County officials need to offer greater input about the need to control unorganized urban sprawl and protect developmental interests of Sioux County. In all cases a proposed annexation will result in both benefits and disadvantages; thus, the county must look at both sides and make a value judgment. At the same time, both the cities and Sioux County should be aware that annexations, whether voluntary or involuntary, also present disadvantages that often offset advantages. Studies have indicated:

1. Annexations based solely upon speculative growth or anticipated tax generating revenue sources should be discouraged.
2. Large annexations may spell trouble if a municipality is forced to supply utilities to the furthest point in the annexation.
3. Except in cases where developed areas are annexed, service and utility costs usually occur prior to any benefit from increased tax revenue is available to off-set them.
4. Large annexations should be preceded by a study that will evaluate service requirements and revenue/expenditure relationships likely to result from the annexation.

If the cities in Sioux County are to consider undertaking possible involuntary annexations, it should be aware that the burden of proof is upon the annexing body as to the ability to offer the annexed area facilities and utilities in a better quality and quantity than the area is currently accustomed to. Annexation solely to increase revenue is not a justifiable process in the eyes of Iowa law. Cities must give detailed information on how it proposes to finance major capital improvements needed to adequately serve the area to be annexed.

EXTRATERRITORIAL ZONING AND LAND USE

Once again, cities in Iowa may extend zoning and land use policies to affect the area inside a radius of two miles from the community's existing corporate limits. However, two restrictions apply that limit a city's ability to apply these land use regulations in Sioux County. Agricultural land uses in the State of Iowa are immune to zoning of any type regardless of proximity to city boundaries. Additionally, exclusive jurisdiction over non-agricultural land uses in the two-mile buffer is not available to cities within zoned counties. This is the case in Sioux County as the county practices and enforces zoning and subdivision regulations.

Nonetheless, cities and counties may establish intergovernmental agreements (often referred to as 28E, referencing the State Code) authorizing a city or county to have specific levels of input into the other entity's land use matters. These 28E provisions may range from granting complete zoning control of the two-mile radius to the city to allowing the county to occupy a non-voting seat on a city's planning and zoning commission (or vice versa), or simply requiring that the city and county planning and zoning commissions meet jointly on occasion to discuss upcoming land use issues. Development issues discussed or addressed within a 28e policy agreement between a city and county should cover such topics as:

- | | |
|--|------------------------------------|
| ▪ Primary land use | ▪ Zoning regulations |
| ▪ Secondary land use | ▪ Building Codes |
| ▪ Utilities – water, sewer, electric | ▪ Design Standards |
| ▪ Infrastructure – roads, storm sewer | ▪ Subdivision review and standards |
| ▪ Public roads – concrete/asphalt/unimproved | ▪ Plat review |

SMART GROWTH PLANNING PRINCIPLES

Across the nation there is a growing concern that current development patterns, considered by some to be dominated by “urban sprawl” are no longer in the best long-term interest of cities, suburbs, small towns, rural communities, or natural areas. Although supportive of growth, cities and counties are beginning to question the costs of building further out from the central community. Spurring the smart growth movement are shifts in demographics and population, a revived environmental ethic, and increased fiscal concerns over development.

The smart growth concept is based upon two general areas of interest; one is issues facing counties today and the second is based upon the recommended smart growth principals used to create policy and means to address the previously addressed issues. The information referenced below is summarized from the “Smart Growth Online” resource provided by the smart growth network (www.smartgrowth.org).

OVERVIEW OF SMART GROWTH ISSUES:

Quality of Life – smart growth offers a framework to build “community” and help create and preserve a sense of place. This can be accomplished through housing and transportation issues, green spaces, recreation and cultural attractions, and policies or incentives to encourage mixed-use neighborhoods.

Design – smart growth creates neighborhoods that offer health, social, economic, and environmental benefits for all. This is achieved by promoting resource efficient design and incorporate green building practices, low-impact developments, and walkable neighborhoods.

Economics – smart growth encourages small business investment and development and adds to the variety of employment opportunities. Efficient government services are the key to this, as are the public and private investments which focus on quality of life improvements.

Environment – many of the current environmental challenges we are facing today are due in part to the way neighborhoods, communities, and cities have been built up during the past half-century.

Health – smart growth reduces health threats from air and water pollution and indoor air contaminants through resource efficient building design along with promoting transportation

options such as public transit, bike lanes or trails, and pedestrian walkways. These alternatives also encourage residents to participate in a more active, healthy lifestyle.

Housing – smart growth promotes housing options for diverse lifestyles and socioeconomic levels. It accomplishes this through mixed-use development, affordable housing alternatives and compact development that revitalizes existing neighborhoods.

Transportation – smart growth protects public health, environmental quality, conserves energy, and improves the quality of life by promoting new or innovative transportation choices.

Chapter 8. AGRICULTURE

AGRICULTURAL ECONOMY

Agriculture is historically the foundation of Sioux County and remains today as one of the primary economic sectors. Although there is more than 500,000 acres of land in Sioux County, of which statistics show nearly all of this land is utilized for agricultural purposes, the number of farms continues to decline. Economies of scale continue to dictate fewer farms remaining in operation, with remaining operations continuing to grow larger.

Table 4 - Farm Acres in Sioux County and Iowa, 1997 and 2002

Line	Sioux County			State of Iowa (ooo's)_		
	1997	2002	%change	1997	2002	%change
Total Farm Acres	503,966	505,175	0.24%	32,313	31,729	-1.81%
Harvested Cropland Acres	438,203	447,482	1.92%	24,009	23,994	0.00%
Pasture or Grazing Acres	12,774	5,181	-59.44%	2,067	1,355	-34.45%
Woodland Acres	1,853	1,519	-18.02%	1,407	1,337	-4.98%

Source: www.seta.iastate.edu, Iowa State University, 2007

The data in the table above shows that while Sioux County is continuing to increase its total number of farm acres, the number of acres of land dedicated to farming statewide has decreased by nearly 2 percent. The amount of harvested cropland has increase in Sioux County by 9,000 acres or almost 2 percent. However, the number of pasture, grazing and woodland acres has decreased in Sioux County, as well as statewide.

The data presented below comes from Iowa State University SETA (Social and Economic Trend Analysis). Specifically, SETA has begun a relatively new program titled "Take Charge," where a majority of this demographic and statistical data is derived from. Take Charge is an economic development educational program developed and supported by the North Central Regional Center for Rural Development. This program is intended to help participants examine trends and characteristics, to better understand the local economy, to assess opportunities for economic growth and to promote teamwork.

These data provide information on the distribution of farms by farm size (in acres). In 2002, the smallest farms (less than 50 acres) accounted for 1.1 percent of Sioux County farms, compared to 1.4 percent statewide. In contrast, 18.5 percent of farms in the county had more than 500 acres. Statewide, the percentage of farms in this category was 22.7 percent.

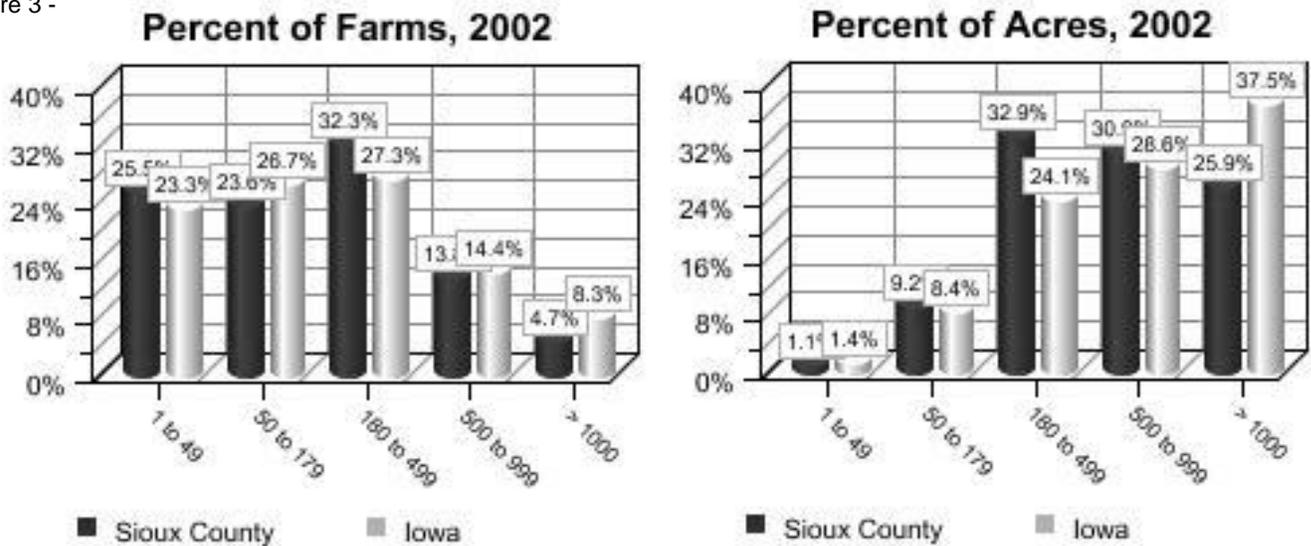
Table 5 - Number of Farms in Sioux County and Iowa, 1997 and 2002

Farms	Sioux County				Iowa			
	1997		2002		1997		2002	
Size in acres	N	%	n	%	n	%	n	%
1 to 49	463	25.5%	427	25.5%	19159	19.8%	21089	23.3%
50 to 179	433	23.8%	395	23.6%	26504	27.4%	24250	26.7%
180 to 499	622	34.2%	541	32.3%	29747	30.8%	24719	27.3%
500 to 999	242	13.3%	231	13.8%	15115	15.6%	13063	14.4%
1,000 or more	59	3.2%	79	4.7%	6180	6.4%	7534	8.3%

Table 6 - Size of Farms in Acres, Sioux County and Iowa, 1997 and 2002

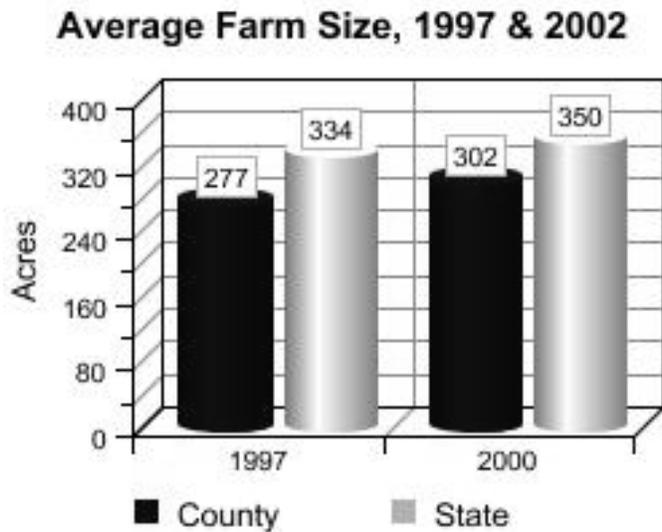
Acres	Sioux County				Iowa			
	1997		2002		1997		2002	
Size in acres	N	%	n	%	n	%	n	%
1 to 49	5503	1.1%	5639	1.1%	373503	1.2%	440621	1.4%
50 to 179	51429	10.2%	46446	9.2%	2978275	9.2%	2663910	8.4%
180 to 499	197360	39.2%	166143	32.9%	9250020	28.6%	7650296	24.1%
500 to 999	163319	32.4%	156001	30.9%	10416072	32.2%	9083537	28.6%
1,000 or more	86355	17.1%	130946	25.9%	9295249	28.8%	11891126	37.5%

Figure 3 -



This page presents data from the 2002 Census of Agriculture on the number and size of farms for Sioux County and the State of Iowa. Farmland comprised nearly 100 percent of the land area in Sioux County, relative to 88 percent statewide in 2002. Recent data shows a reported 1,673 farms in Sioux County, with an average of 302 acres per farm. This average farm size was smaller than the statewide average of 350 acres per farm. However, both Sioux County and the state have increased significantly from five years prior. Farm size in Sioux County has increased by 20.6 percent from 1997 to 2002. Similarly, average farm size throughout the entire state has increased by 15.9 percent. Both of these statistics go to support the ongoing trends of fewer family farmers and an increase of corporate or commercialized farming.

Figure 4 -



Source: www.seta.iastate.edu/takechagel/, Iowa State University, 2007

Note: In 2002, the U.S. Department of Agriculture changed its data collection methods to improve its coverage of "small farmers". Due to this change, the numbers from the 2002 Census of Agriculture are markedly different from past censuses. To help accommodate this change in methodology, the Department of Agriculture adjusted the counts of 1997 - these adjusted numbers are noted with the label "Adj. 1997". As a result of these changes and adjustments, readers should use extreme caution in the interpretation of longitudinal trends.

Table 7 - Livestock Inventories for Sioux County, 1982-2002

Line	1982	1987	1992	1997	2002
Farms with Hog/Pig Inventories	1,121	1,021	972	688	528
Number of Hogs/Pigs	416,014	441,534	601,488	762,294	869,086
Farms with Cattle/Calf Inventories	1,196	894	845	677	634
Number of Cattle/Calves	213,834	178,525	186,379	174,053	221,653
Farms with Dairy Cattle Inventories	272	185	155	117	100
Number of Dairy Cattle	11,522	9,404	10,100	14,214	20,152

Source: www.seta.iastate.edu, Iowa State University, 2007

As indicated in the table above, there are very distinct trends that appear relative to agricultural livestock activities in Sioux County. First, the number of farms with inventory for each of the three major livestock categories (hogs, cattle and dairy cattle) was reduced drastically over this twenty year span. Conversely, the number of livestock in each of these categories increased significantly, some as much as 90-100 percent. The number of farms with hogs in Sioux County decreased by 53 percent, but the number of hogs raised in Sioux County during this same period increased by an astounding 109 percent, more than doubling the number of hogs in Sioux County. The number of cattle and calf operations, although decreasing by 47 percent, only experienced a 3.7% increase in the number of livestock. Finally, dairy cattle also declined by more than half its number of total operations. However, the amount of dairy cattle livestock increased by nearly 75 percent in Sioux County. Once again, as expressed earlier in this chapter, these long range statistics go toward supporting the ongoing trends of phasing out the small family farmer with larger more commercialized or industrial farming operations that can compete within the global and international market through economies of scale.

AGRICULTURAL LAND VALUES

With changing trends in farming experienced in Sioux County, northwest Iowa, and the state, continued shifts in farming can be expected in the future. One of the criteria that will have a significant impact on future trends in the agricultural economy in Sioux County is the value of agricultural land. The land value measure dictates to farmers and farm corporations how much equity they have in their land based against their debt and often times is the factor allowing agricultural operations to borrow funds for new equipment and operations. Sioux County is fortunate to have some of the most nutrient rich black topsoil in the state, therefore keeping land values higher than statewide averages. The following data explores the difference between agricultural land values between Sioux County, the northwest Iowa district, and the state of Iowa as a whole. Sioux County maintains a high level of agricultural land value due primarily to the natural presence of good topsoil rich in nutrients.

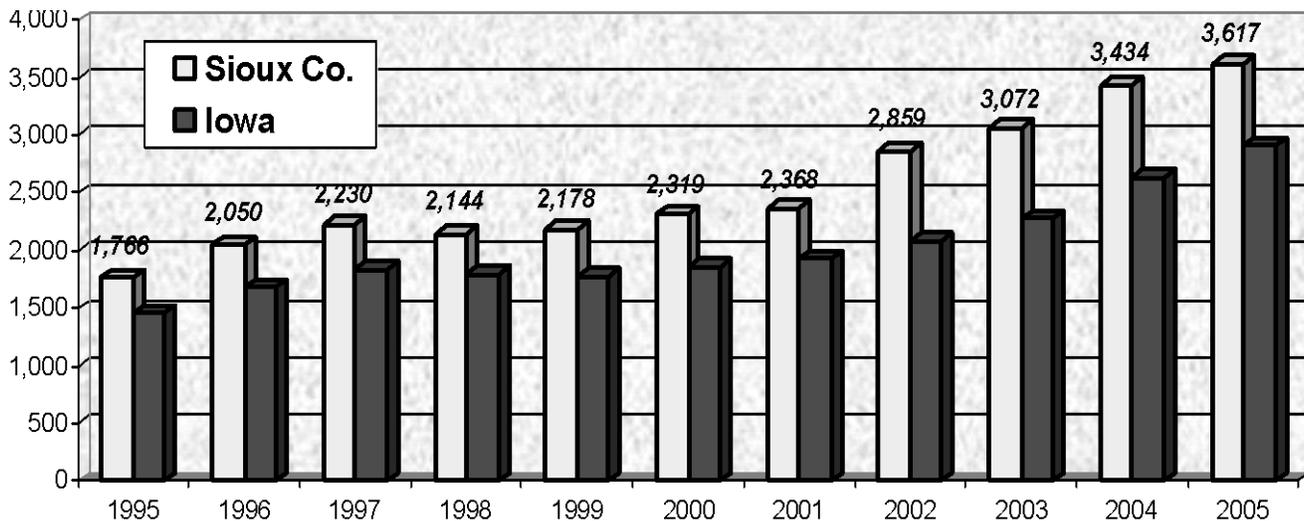
Table 8 - Sioux County and Iowa Agricultural Land Values, 1995-2005

Year	Sioux County (weighted avg. for all grades)	District (NW Iowa) (weighted avg.)	Iowa (weighted avg. for all grades)
2005	\$3,617	\$3,393	\$2,914
2004	\$3,434	\$3,118	\$2,629
2003	\$3,072	\$2,683	\$2,275
2002	\$2,859	\$2,434	\$2,083
2001	\$2,368	\$2,240	\$1,926
2000	\$2,319	\$2,198	\$1,857
1999	\$2,178	\$2,059	\$1,781
1998	\$2,144	\$2,174	\$1,801
1997	\$2,230	\$2,263	\$1,837
1996	\$2,050	\$2,071	\$1,682
1995	\$1,766	\$1,755	\$1,455

Source: SETA, Iowa State University – December 2005

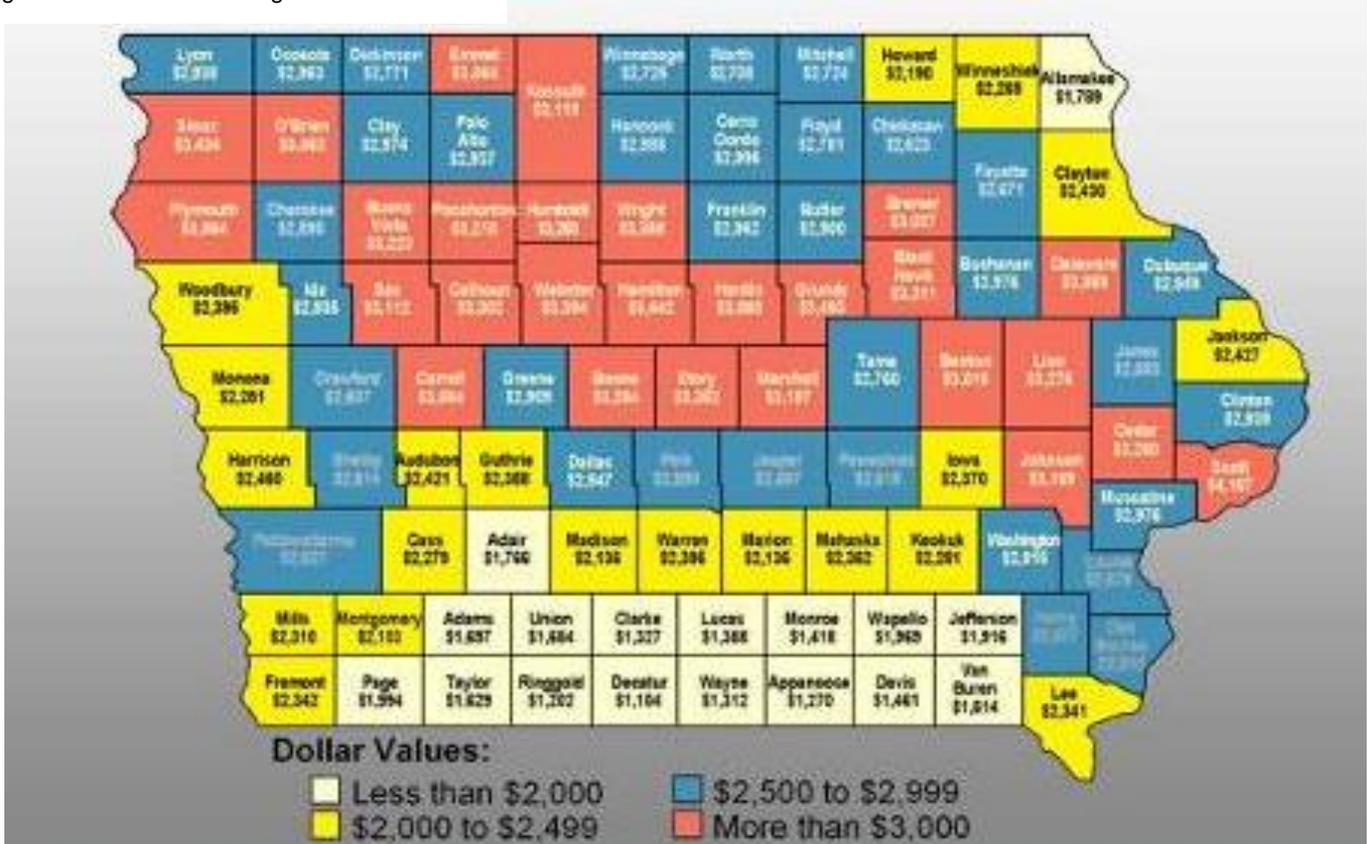
This data originates from the Ag Land Values Survey which is conducted annually by the Iowa Agricultural and Social and Economic Trend Analysis at Iowa State University. The following figure shows an estimated 105 percent increase in agricultural land values between 1995 and 2005. Furthermore, dramatic increases have been experienced since 2001, beginning when land values jumped 20.7 percent between 2001 and 2002. This was followed by a significant 11.8 percent increase between 2003 and 2004. Finally, another 5.3 percent increase occurred from 2004 to 2005.

Figure 5 - 1995 to 2005 Agricultural Land Values for Sioux County and Iowa



The map presented below depicts average land values across the State of Iowa during 2004. As indicated on the map, it is clear to see that Sioux County is situated amidst some of the richest, prime agricultural soils found across the nation. Northwest Iowa, on average, offers the highest land values found across the state.

Figure 6 - 2004 Iowa Average Land Values



Source: Iowa State University, University Extension, 2005

GRAIN PROCESSING FACILITIES

On the following page is an Iowa Department of Transportation map identifying grain facilities and shipment capacities within Sioux County. This data supports the strong agricultural infrastructure and transportation network in place in Sioux County. In Sioux County alone, there are four (4) primary gain loading facilities with a total storage capacity of up to 12.4 million bushels of grain. By far the largest grain storage and transportation facility in Sioux County is the Midwest Farmers Cooperative grain terminal which can handle up to 100 hopper car trains and has a storage capacity of more than 6 million bushels alone. Grain processing facilities are located in Sioux Center and Sheldon.

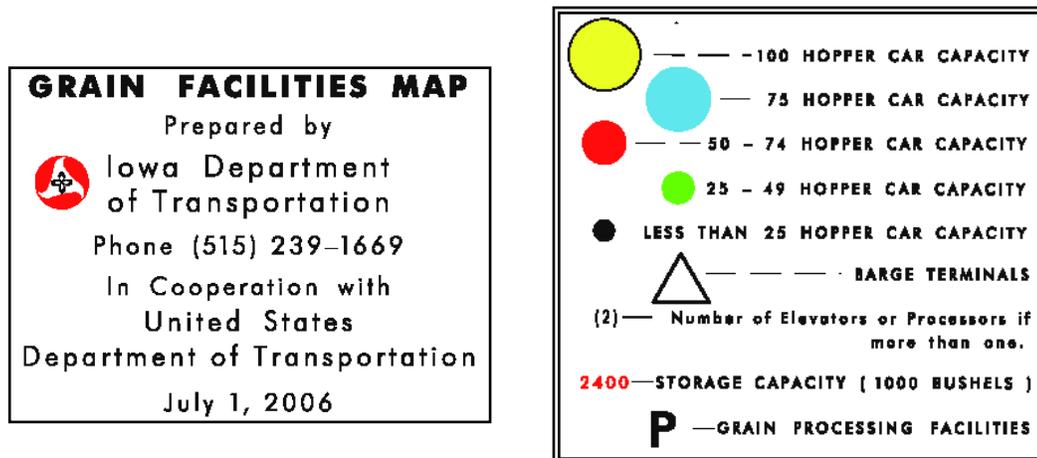
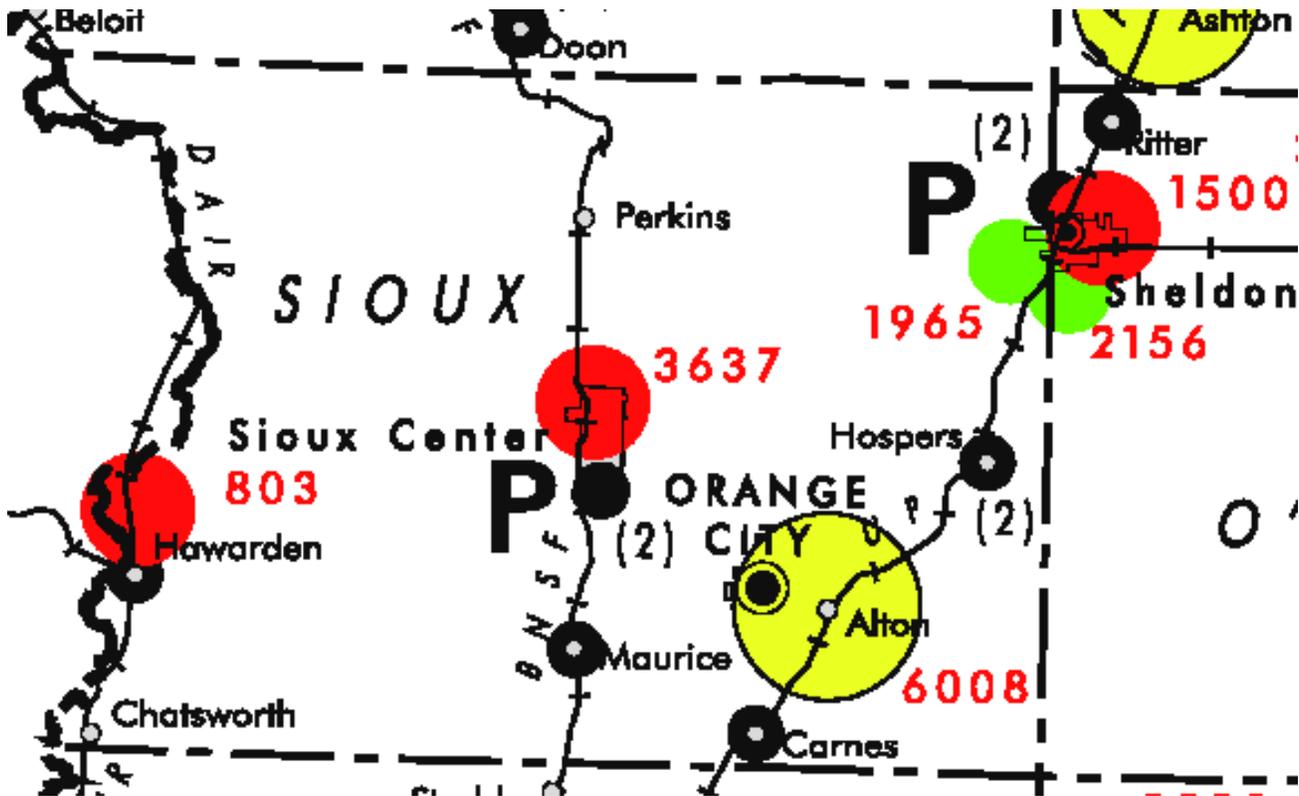


Figure 7 - Sioux County Grain Storage and Transportation Map



FARM EMPLOYMENT

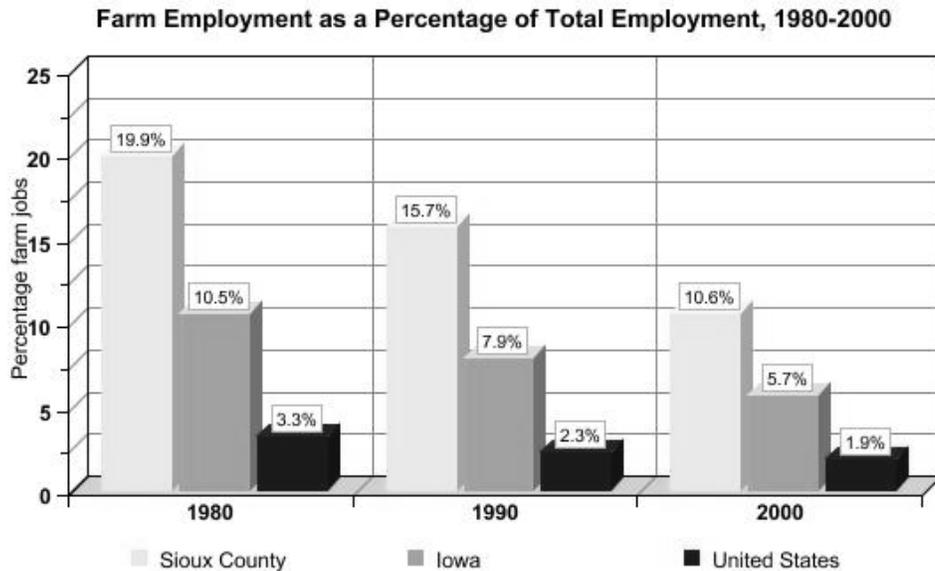
Farm employment in Sioux County, the State of Iowa and the United States all represent a declining share of total employment. In 1980, the national percentage of jobs in farming was 3.3 percent. By the year 2000, the percentage of farm jobs had declined to 1.9 percent. Similarly, Sioux County's changing dependence on farm employment decreased by an even greater percentage from nearly 20 percent in 1980 to just more than 10 percent in 2000. Over the course of these 20 years, Sioux County lost nearly half of its farm employment. Finally, the State of Iowa also conformed to this trend when its entire farm employment declined from 10.5 percent in 1980 to only 5.7 percent in 2000. Although all three governmental territories experienced declines in farm employment, the fact that more than 10 percent of total employment in Sioux County is comprised of farm employees, this indicates the rural nature of Sioux County and the importance of agriculture to the county's economy.

Table 9 - Percentage Farm Employment

Year	Sioux County	Iowa	United States
1980	19.9%	10.5%	3.3%
1990	15.7%	7.9%	2.3%
2000	10.6%	5.7%	1.9%

Source: www.seta.iastate.edu/takecharge/, Iowa State University, 2007

Figure 8 -



VALUE ADDED AGRICULTURE

In a 2004 report issued from the Iowa Agricultural and Home Economics Experiment Station, value added agriculture in Iowa has focused on working with producer groups and individual entrepreneurs to build long term economic, environmental and socially sustainable capacities. Emphasis has been on working with existing value-added groups, development of value chains, and working to develop quality systems to ensure food safety and accountability. Future value added programs being explored in Iowa, specifically in partnership with the cooperation of Iowa State University and the Iowa Agricultural Experiment Station, include capacity for building and training for value added agricultural groups, with a special emphasis on beginning farmers. Other efforts taking place include developing niche value markets for specialized products to assist producers in determining the highest market for their products.

Sioux County has taken extensive measures to create an environment that is friendly and inviting for value added agricultural enterprises. With the number of biotechnical, animal pharmaceutical and agricultural related industries in Sioux County, it becomes a natural fit for future innovative value added industries to feed off of the high level of agricultural research and technology currently taking place. One such recent example is the establishment of Bison Renewable Energy, LLC which during 2007 will be constructing a multi-million dollar facility situated northwest of Sioux Center. This innovative plant will contract with local animal confinement facilities to purchase their waste product from which Bison Renewable Energy will then process this waste to capture the methane and other natural gases. These gases are then captured and re-sold back to the local natural gas suppliers in Sioux County. Furthermore, the waste product after the primary gases are removed is converted into a fertilizer and animal bedding product which can also be sold back to local farmers.

ALTERNATIVE ENERGY

Wind Generation

From the website www.itsgood4us.com, a great deal of information pertaining to alternative energy sources and its benefits is provided to consumers of energy. Wind energy is clean, renewable,

pollution free and produced locally with no imports. Consistent, strong winds are located in the interior of the continent in places like north central Iowa, west Texas, South Dakota, etc. In the U.S., today, only 1% of the nation's energy is produced by the wind, compared to Denmark which produces 20%. Across northwest Iowa, wind generation farms are increasing becoming the norm with several hundred wind generators located within proximity to Sioux County. However, to date, there are no commercial wind generators or wind farms located within Sioux County. Local leaders and government officials both desire to explore this alternative energy source and encourage the recruitment and development of wind generation companies, if prevailing conditions exist.

Ethanol

According to www.iowacorn.org, there are fifteen (15) dry corn ethanol milling plants in production within the State of Iowa. Eight (8) more ethanol plants are either under construction or in planning phases. Sioux County is home to one of these ethanol plants, located in Sioux Center. In the counties that lie adjacent to Sioux County, there are another 2 ethanol plants in operation with an additional four (4) plants in either the planning or construction phases. In the early days of ethanol, for every one unit of energy it took to plant, harvest and process ethanol, it had a negative "energy balance." However, since those days, steady improvements have been made in corn yield and efficiency of harvesting and ethanol processing. According to www.itsgood4.us.com, latest studies shows corn ethanol with a positive energy balance of 1:1.64; a 64% net increase in energy. Also, there are two developments that promise dramatically higher yield; sweet sorghum ethanol and cellulosic ethanol.

Modern gasoline engines are now set up to run E10. In Iowa, about 60% of the gasoline sold is E10. To use higher percentages like E85, engines need appropriate seals, hoses and engine settings (timing, etc.). Vehicles set up to run E85 have been selling for a number of years and are sold as "Flex Fuel" vehicles. Such vehicles have a fuel sensor in the fuel line to monitor the mix of gasoline and ethanol present and adjust the engine appropriately for the fuel being used. The stimulus for these vehicles being available was the 1992 EPA act that mandated government vehicle fleets use renewable fuels. There are people that have such "Flex Fuel Vehicles (FFVs) and are not even aware they can run E85. Currently, 33 gasoline stations across Iowa distribute E85 fuel.

Soy Biodiesel

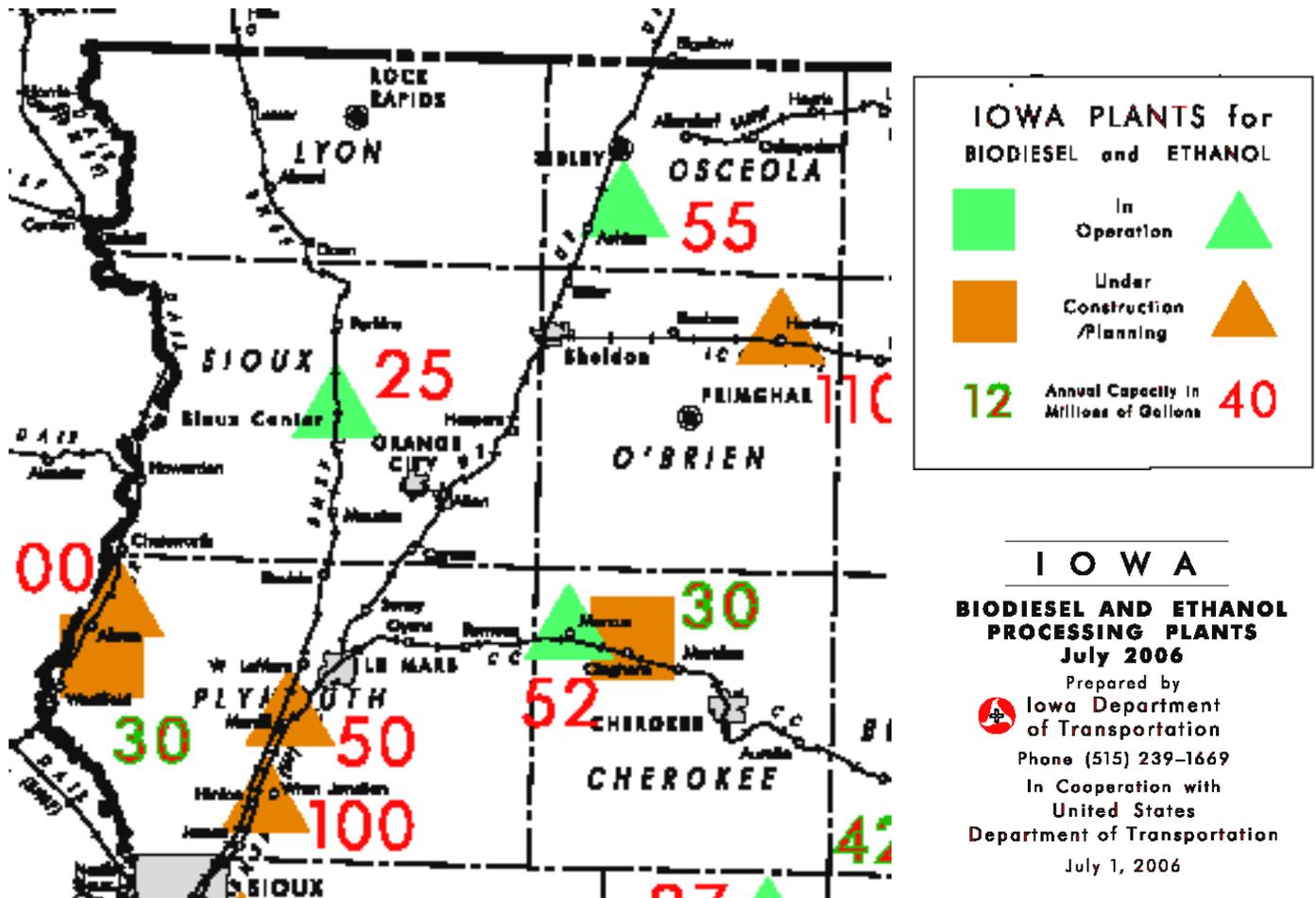
Standard diesel fuel is made from petroleum, but is heavier and less refined than gasoline. According to www.itsgood4.us.com, biodiesel is a fuel suitable to run in diesel engines that is derived from contemporary sources of oil like soybean oil, canola oil (from rape seed) or even modern algae. Since biodiesel has not collected impurities over millions of years, it is a very clean and pure fuel source to burn. Biodiesel is so similar to petroleum diesel fuel that no modification to the diesel engine is required. Soy biodiesel is becoming readily available, yet it is far from being on every corner gas station. Several locations in Sioux County will deliver soy biodiesel to the farm. However, to purchase soy biodiesel at the pump for a car, truck, or other equipment will be a difficult endeavor. Currently, no biodiesel plants are located within Sioux County. However, two future soy biodiesel plants are being planned for construction in counties adjacent to Sioux County.

Biodiesel is no more toxic than table salt and more biodegradable than sugar. The EPA has classified biodiesel as a suitable clean up agent for petroleum spills. As expressed in the previous section, ethanol made from corn offers an energy balance of around 1:1.64 (a 64% gain in net energy), as of a USDA study in 2004. Accordingly, biodiesel made from soy oil has an energy balance of 1:3.24

(224% net energy gain) and a yield of 49 gallons per acre. In 2004, an estimated 74 million acres of soybeans were harvested across the nation. At 49 gallons per acre, that is 3.626 billion gallons of potential soy biodiesel. In 2003, 23% of the fuel consumed for transportation was diesel fuel, or the equivalent of 39.8 billion gallons.

Below is a map, provided by the Iowa Department of Transportation, which shows locations of both existing and proposed ethanol and soy biodiesel plants as of July 2006.

Figure 9 – Northwest Iowa Biodiesel and Ethanol Processing Plants, 2006



Chapter 9. PHYSICAL FEATURES & NATURAL RESOURCES

Sioux County, located in northwest Iowa, is in the second tier of counties south of Minnesota and in the first column of counties east of the South Dakota border. The county is comprised of a total land area consisting of approximately 491,456 acres, or 767.9 square miles. Additionally, there is an estimated 448 acres of water or 0.7 square miles of ponds, pits and lakes.

Physical features, an important element in land use planning, has been largely ignored in the past in determining future land uses. Modern emphasis on environmentally sensitive areas and the availability of advanced information on geological structure and soils have made it possible to place more emphasis on physical features analysis in land use planning. Climate, location, geologic structure, topography, drainage, surface waters, and soils each uniquely affect the types of land use that are best suited for a particular tract or parcel of land. Some of these factors, such as topography, drainage or soils, weigh should be considered more intently when determining acceptable land uses for an area. The purpose of this section is to determine natural conditions, as they relate to Sioux County, so adequate consideration may be given when determining future land uses. The following material is primarily accessed from the *Soil Survey of Sioux County, Iowa* published by the United States Department of Agriculture. This survey was made cooperatively by the Natural Resources Conservation Service; the Iowa Agriculture and Home Economics Experiment Station, the Cooperative Extension Service; Iowa State University; and the Department of Soil Conservation, State of Iowa.

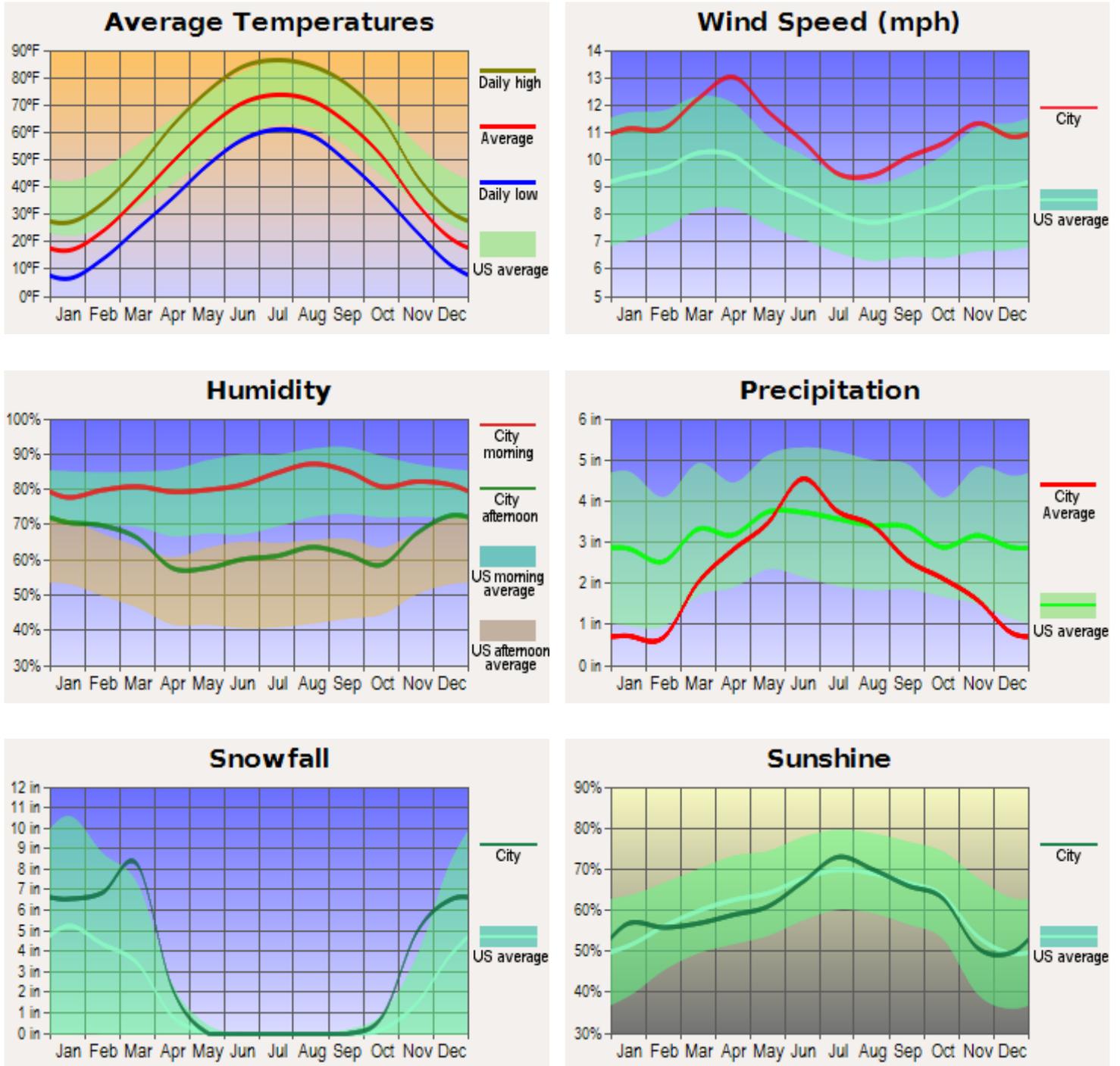
CLIMATE

Climate becomes a major factor in land use planning when it relates to agricultural production and construction seasons for roads and buildings. Climate limits both agricultural and construction related activities to certain times of the year. In the winter it is generally cold, while quite hot temperatures and occasional cool spells characterize the summer. During the warmer months, the trend of warm, moist air masses from the Gulf of Mexico push north from the southern states creating a system of rain and thunderstorm, which are often heavy. According to data prepared by the National Climatic Data Center in Asheville, North Carolina and summarized in the USDA Soil Survey for Sioux County, the total annual precipitation is about 27 inches. Of this, 20 inches or 75 percent usually falls during April through September. In the winter, the average temperature is 20 degrees F, and the average daily minimum temperature is 10 degrees. In summer, the average temperature is 73 degrees and the average daily maximum temperature is 84 degrees. This temperature range allows for a frost-free growing season of approximately 150 days. The average relative humidity in mid-afternoon is about 60 percent. Humidity is higher at night, and the average at dawn is about 80 percent. The sun shines 70 percent of the time possible in summer and 55 percent in winter. The prevailing wind is from the northwest. Average wind speed is the highest during the spring months at 13 miles per hour.

The City of Hawarden, located in the southwest corner of Sioux County, holds the records for the lowest and highest recorded temperatures in Sioux County. Hawarden reached a -30 degrees F on January 14, 1982. Also, the City of Hawarden reached its record high temperature of 104 degrees F on July 30, 1955.

The following climate charts represent the averages in Sioux County based on data reported by more than 4,000 weather stations across the nation. The data seen below is representative of Sioux Center, Iowa, since the “City-Data.com” climate source does not incorporate this data at the county level.

Figure 10 – Average Climate Trends in Sioux County



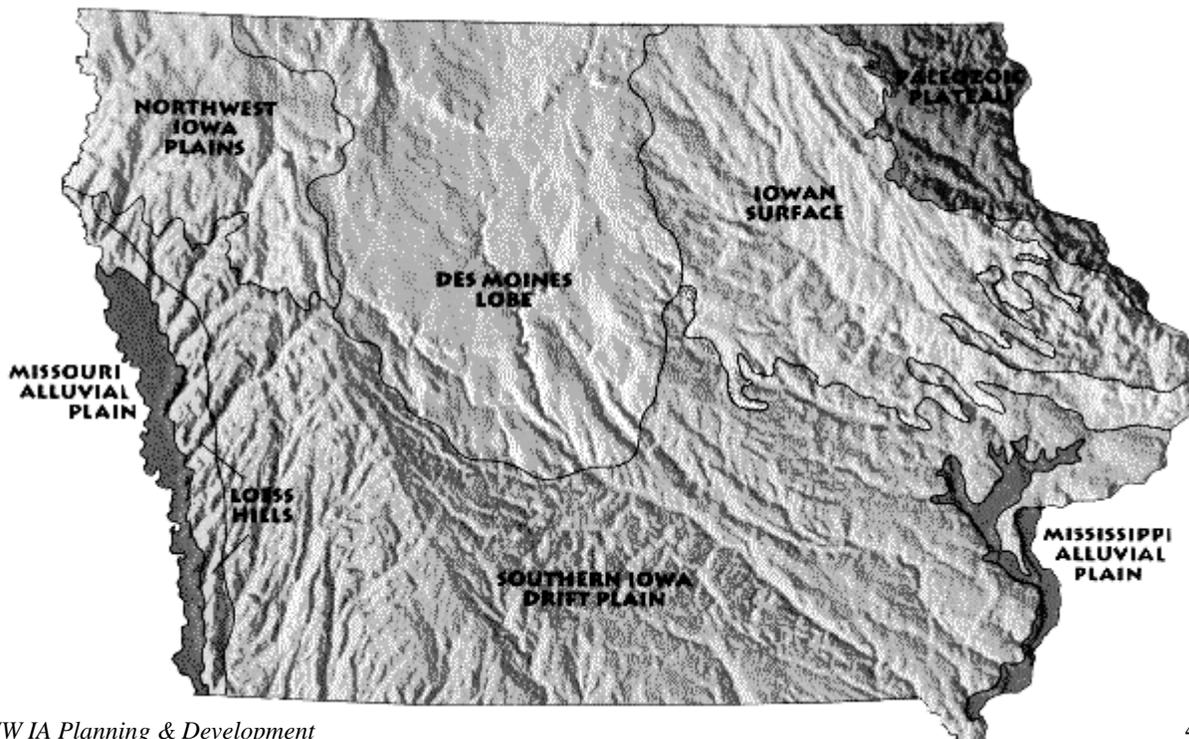
LANDSCAPE/LANDFORMS

As defined by the Iowa Department of Natural Resources, a “Landscape” is a collection of shapes or landforms. Iowa's landscape varies widely in appearance from place to place across the state. Individual landform shapes reflect the diverse effects of deposits left by glaciers, wind, rivers, and seas in the geologic past. Examples include loess hills, moraines, kettles, kames, sinkholes, caves, springs, algific slopes, oxbow lakes, and entrenched valleys. The landscape in Sioux County varies greatly with the highest elevation or topography in the north and northeast portions of the county. The elevation then declines to the southwest toward the Big Sioux River.

All of Sioux County lies within the “Northwest Iowa Plains” landform region of Iowa. As summarized by the Iowa Department of Natural Resources from information obtained from *Landforms of Iowa* by Jean C. Prior, the Northwest Iowa Plains landform is characterized by vigorous erosion that accompanied the glacial movements, which also produced open rolling hills across this region. Loess is abundant, a reflection of its nearness to the Missouri and Big Sioux River valley sources. Land elevation is uniformly higher and precipitation lower than elsewhere in Iowa. Low wind-polished outcrops of reddish Sioux Quartzite, the oldest bedrock seen in the state (1.6 billion years), occurs in the northwest corner of the region. This red quartz is quite evident across much of Sioux County, of which is also quarried and is utilized in roadway projects.

Other characteristics of the Northwest Iowa Plains landform offer long gentle slopes and wide shallow valleys. Since the Northwest Iowa Plains landform has gone much longer without glaciating, versus the Des Moines Lobe landform, drainage patterns are defined and well established and ponding areas are not as prevalent. The surface cover across all of Sioux County is covered by loess, which is a fine-grained, glacially deposited material. Since loess is a very productive parent material for soil formation, it creates an important source for agricultural activity and land use. Since Sioux County is a vital productive agricultural county, soil considerations and topography should be important factors for consideration when planning future land uses.

Figure 11 – Landform Regions of Iowa



SOILS

Soil conditions determine several important land use decisions when planning where future growth and development will occur. Where urban sprawl or suburban growth occurs on a fragile and balanced ecosystem the types of soils and their suitability or lack thereof to development becomes of great importance. Factors such as structure suitability, percolation rate, water holding capacity, productivity, slope, and nutrient composition are all important in determining future growth patterns. These factors all have various effects on placement of public utilities, residential and commercial development, construction or placement of recreational areas, as well as local agricultural usage.

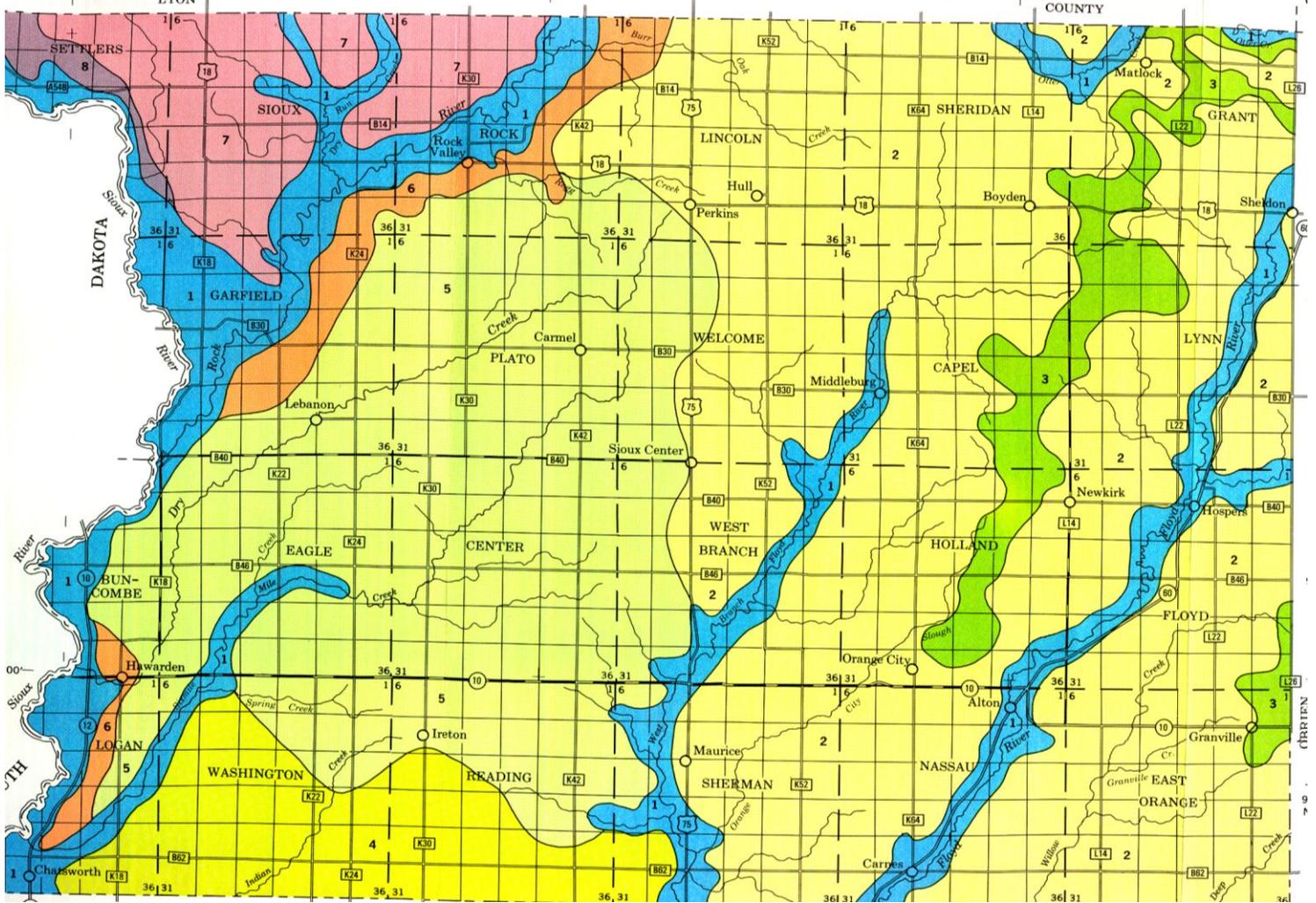
According to the Soil Survey of Sioux County completed by the U.S. Department of Agriculture, there are eight (8) major soil associations within the county. They include the Galva-Colo-Calco Association, Galva-Primghar Association, Primghar-Galva-Marcus Association, Galva-Ida Association, Galva-Radford Association, Bolan-Dickman-Ocheyedan Association, Moody Association and the Steinauer-Moody Association. Identified in the soil legend on the following page is a brief description of each of the soil associations.

The Galva-Primghar and Galva-Radford associations of soils comprise approximately 75 percent of the land area in Sioux County. These associations are described as level to gently sloping, well drained and somewhat poorly drained areas, silty soils formed in loess and alluvium. Being located on uplands, bottomlands, and alluvial fans combined with the rich top layer of loess soils makes the soil types in these classifications suited to productive agricultural activities. The one area of Sioux County which does have unique soil and topographic features is the northwest corner of Sioux County, in an area of land bordered by the Big Sioux River on the west, the Rock River on the south and east and Lyon County to the north. This area of Sioux County north and west of the City of Rock Valley is part of the Moody Association of soils which are classified as nearly level to strongly sloping, well drained and silty soils on uplands. There appears to be more topographic and elevation changes within this portion of Sioux County, primarily due to the river corridors of the Big Sioux and Rock rivers.

The more strongly sloping areas located adjacent to the Floyd, West Branch of the Floyd, Rock and Big Sioux River corridors comprise the Galva-Colo-Calco Association. These soils are generally strongly sloping loamy soils formed in glacial sediments and the underlying sand and gravel. Soils in this area require special treatment to allow most agricultural uses due to slope and texture. Terracing can sometimes be used for row cropping if the subsoil is not disturbed. However, these areas are mostly suitable for pasture land or open space. Additionally, other types of urban development such as housing and/or commercial developments can also have detrimental effects on fragile soil types or areas of steep slope such as river corridors. These areas are often times attractive to suburban or sprawl developments due to their natural characteristics and scenic views. However, developments along these river corridor areas and other fragile topographical areas should be carefully managed so as not to compromise the natural resources of the county.

When the Planning and Zoning Commission and/or county zoning administrator review sites for zoning compliance or building permits, the proposed use should be cross referenced in the soil survey with respects to the particular soil type being reviewed. If the zoning administrator or planning and zoning board are unsure of how to interpret the soil survey on a particular issue, the Sioux County Soil Conservation Service office should be consulted.

Figure 12 – General Soil Map of Sioux County, Iowa



SOIL LEGEND*

- 1 GALVA-COLO-CALCO ASSOCIATION: Nearly level and gently sloping, well drained and poorly drained, silty soils formed in loess and alluvium; on bottom land and stream benches
- 2 GALVA-PRIMGHAR ASSOCIATION: Level to gently sloping, well drained and somewhat poorly drained, silty soils formed in loess; on uplands
- 3 PRIMGHAR-GALVA-MARCUS ASSOCIATION: Nearly level and gently sloping, somewhat poorly drained, well drained, and poorly drained, silty soils formed in loess; on uplands
- 4 GALVA-IDA ASSOCIATION: Gently sloping to strongly sloping, well drained, silty soils formed in loess; on uplands
- 5 GALVA-RADFORD ASSOCIATION: Nearly level to moderately sloping, well drained and somewhat poorly drained, silty soils formed in loess and alluvium; on uplands, bottom land, and alluvial fans
- 6 BOLAN-DICKMAN-OCHEYEDAN ASSOCIATION: Nearly level to strongly sloping, well drained, loamy soils formed in alluvium and eolian material; on uplands and stream terraces
- 7 MOODY ASSOCIATION: Nearly level to strongly sloping, well drained, silty soils formed in loess; on uplands
- 8 STEINAUER-MOODY ASSOCIATION: Strongly sloping to very steep, well drained, loamy and silty soils formed in glacial till and loess; on uplands

*Texture terms in the descriptive headings refer to the surface layer of the major soils in the associations.

**GENERAL SOIL MAP
SIOUX COUNTY, IOWA**

United States Department of Agriculture
Natural Resource Conservation Service
(formerly Soil Conservation Service)

Iowa Agriculture and
Home Economics Experiment Station

Cooperative Extension Service,
Iowa State University

Division of Soil Conservation,
Iowa Department of Agriculture
And Land Stewardship

A listing of soil types with detailed information may be obtained in the Soil Survey of Sioux County, Iowa. Furthermore, attached as Appendix 1 to this plan, is a copy of detailed schedules of soil suitability depending upon types of use.

Table 10 – Number of Acres and Percentage of Land of Soil Types in Sioux County

<u>SOIL TYPE</u>	<u>SOIL NAME</u>	<u># OF ACRES</u>	<u>% OF LAND IN SIOUX CO.</u>
1	Ida silt loam	8,733	1.77
8B	Judson silty clay loam, 2 to 5 percent slope	7,075	1.44
11B	Radford-Judson complex, 0 to 5 percent slope	10,065	2.04
26	Kennebec silty clay loam, 0 to 2 percent slope	1,866	0.38
27B	Terril loam, 2 to 5 percent slope	1,843	0.37
28B	Dickman sandy loam	1,975	0.40
31	Afton silty clay loam, 0 to 2 percent slope	8,428	1.71
32	Spicer silty clay loam, 0 to 2 percent slope	653	0.13
33	Steinauer clay loam	4,094	0.83
54	Zook silty clay loam, 0 to 2 percent slope	309	0.06
72	Estherville loam	1,010	0.21
78	Sac silty clay loam	2,870	0.58
91	Primghar silty clay loam	69,210	14.07
92	Marcus silty clay loam, 0 to 2 percent slope	12,973	2.64
108	Wadena loam, 24 to 32 inches to sand and gravel	3,103	0.63
116	Graceville silty clay loam, 0 to 2 percent slope	3,543	0.72
133	Colo silty clay loam, 0 to 2 percent slope	19,881	4.04
203	Cylinder loam, 32 to 40 inches to sand and gravel	502	0.10
259	Biscay loam, 32 to 40 inches to sand and gravel	546	0.11
308	Wadena loam, 32 to 40 inches to sand and gravel	4,719	0.96
309	Allendorf silty clay loam	1,721	0.35
310	Galva silty clay loam	232,863	47.33
401	Crofton silt loam	2,256	0.46
410	Moody silty clay loam	17,882	3.63
428B	Ely silty clay loam, 2 to 5 percent slope	6,426	1.31
467	Radford silt loam, 0 to 2 percent slope	14,673	2.98
474	Bolan loam	4,226	0.86
485	Spillville loam, 0 to 2 percent slope	3,479	0.71
486	Davis loam, 0 to 2 percent slope	4,088	0.83
615	Colo-Spillville complex, channeled	699	0.14
670	Rawles silt loam, 0 to 2 percent slope	872	0.18
733	Calco silty clay loam, 0 to 2 percent slope	5,166	1.05
785	Spillco loam, 0 to 2 percent slope	826	0.17
801	Bolan variant loam	1,782	0.36
810	Galva silty clay loam	20,373	4.14
812	Moody silty clay loam	2,152	0.44
878	Ocheyedan loam, 2 to 5 percent slope	1,447	0.29
5010	Pits, sand and gravel	822	0.17
5040	Orthents, loamy	856	0.17
5044	Fluvaquents, 0 to 2 percent slopes	3,642	0.74
AW	Animal waste lagoon	41	0.00
INT	Intermittent water	148	0.03
SL	Sewage lagoon	114	0.02
W	Water	2,048	0.42
TOTAL		492,000	100.00

From information obtained through the Soil Survey of Sioux County, Iowa published by the USDA Natural Resources Conservation Service, is a summary of why soil types and soil conditions may prove beneficial to both daily and long term planning efforts in Sioux County.

HOW SOIL SURVEYS CAN HELP FARMERS

To stay in business, farmers have to evaluate important developments in agricultural management. Farm production depends largely on fitting soil management practices to the soil properties as accurately as possible. It is the right combination of a number of practices that gets optimum results. Researchers try various combinations of fertilizers, tillage methods, water management, and conservation measures. Combinations that produce the greatest yields at the least cost on soils at experiment stations can be expected to give equally good results on similar soils elsewhere. Soil descriptions outlined in the Sioux County Soil Survey can aid in evaluating prospective changes in management of soils.

Crop yields: Estimated yields of major crops under a high level of management are included in published soil surveys. Estimated yields can help calculate approximate returns expected on soils and determine whether a high level of management would increase yields enough to pay the extra cost.

Conservation plan: A soil survey can help determine how to use soils without damage. It also helps determine conservation measures needed to control erosion and maintain or increase productivity.

Reclaiming land: Some eroded soils respond readily to soil treatments, such as fertilizer, lime, and manure. A soil survey can help decide whether added treatment to reclaim soils is likely to succeed.

Waste disposal: Feedlots, poultry plants, and dairy farms dispose of manure and other wastes into soils. A soil survey helps determine how much waste the soils can absorb and in what form.

LAND USE PLANNERS (County Planning Commission and/or Zoning Administrator)

Soil surveys assist planners to make and substantiate decisions that local government officials translate into zoning ordinances, building permits, sewer projects, and other regulations. Information about soil limitations for given uses helps prevent major mistakes in land use and unnecessary costs to individuals and the county.

Soil surveys help in determining the extent of flood prone areas, and identify hazards that affect such areas. In many states soil surveys are used to guide decision-makers in restricting the use of flood plains for housing, septic tank absorption fields, and other intensive development. Zoning areas for housing, recreation, commercial, and other kinds of development should take account of the suitability and limitations of soils for such uses. Soil surveys describe soil properties in detail and can help planners establish general patterns of soil suitability and limitations for various land uses.

Septic tank absorption fields do not work in wet or impermeable soils. Soil surveys provide detailed descriptions of soil properties that can be used to determine the suitability of areas for absorption fields. They indicate soil hazards that affect absorption fields, such as slow permeability caused by high clay content, the presence of a high water table, or excessive permeability that may allow effluent to pollute ground water.

Prime farmland can be identified through use of soil surveys. Other areas suited to development and not so well suited to farming may be selected for development instead. In planning uses for specific areas, an onsite investigation by a trained professional can determine if there are any soil hazards or limitations, and whether these can be overcome by corrective measures.

AQUIFERS AND GROUND WATER

In the Iowa Department of Natural Resources’ published book *Iowa’s Groundwater Basics - A Geological Guide to the occurrence, use & vulnerability of Iowa’s aquifers*, Sioux County is located within the Northwest Iowa Groundwater Province. Groundwater sources in northwest Iowa can generally be characterized as “fair” in terms of availability and quality. However, there are fewer options presented in northwest Iowa in comparison to those located in central or northeast Iowa. Water sources in Sioux County are typically sought through two major sources; 1) Surficial Aquifers (shallow aquifers) including alluvial aquifers and buried-valley aquifers; and 2) the Dakota Aquifer (deep aquifer).

Surficial Aquifers:

Located beneath river valleys are shallow sand and gravel deposits containing alluvial aquifers or shallow well aquifers. These aquifers are an important source of water supply to many agricultural and rural uses; however, their extent of usage is limited to the river valley corridors. To the left is a map showing alluvial aquifers across the state of Iowa. One advantage to these water sources is that they are typically less than 100 feet deep and relatively easy to access. On the other hand, the shallow depths and their porosity make them vulnerable to seasonal precipitation conditions such as drought or flooding. Also, shallow aquifers are much more susceptible to contamination issues.

Figure 13 – Alluvial Aquifers of Iowa

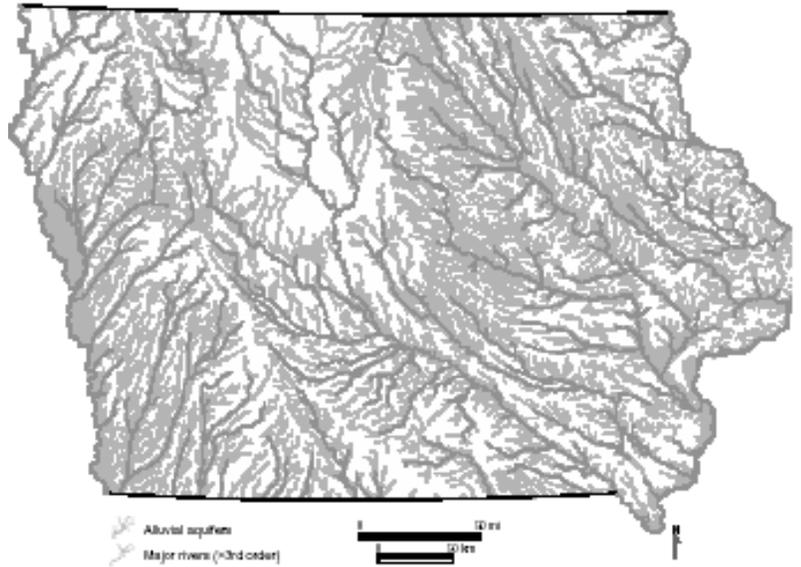
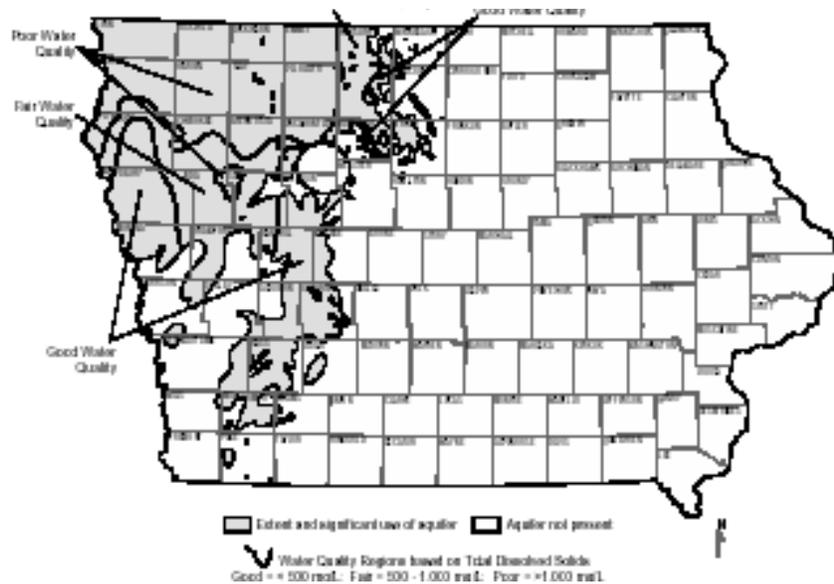


Figure 14 – Dakota Aquifer of Iowa

Dakota Aquifer:

The Dakota aquifer is comprised of sandstone deposits 200 to 300 feet thick, providing a quality water supply to many rural and community water supplies across northwest Iowa. The water sources from this aquifer are often times 100 feet to 600 feet deep and typically produce 100 to 500 gallons per minute. The downfall to this deep aquifer is that initial or raw water quality can be poor in quality due to high concentrations of natural minerals and dissolved solids. Raw water can sometimes display a rust color to it as a result of the iron-bearing minerals found within this aquifer. When Sioux County is guiding its future development, water resources should be referenced when considering development and the impact of new water supplies in rural areas.



DRAINAGE/WATERSHED

Sioux County has three major watersheds dissecting portions of its landscape. The Floyd watershed is the smallest watershed of the three, but comprises the largest percentage of Sioux County land, in terms of the number of acres. This watershed follows the Floyd River and the West Branch of the Floyd River from the northeast corner of Sioux County, south to its discharge point in the Bog Sioux River in Plymouth County, Iowa. The Rock River watershed is located in portions of southwest Minnesota, and Lyon County and Sioux County, Iowa. This watershed follows the Rock River from its origins in Minnesota, south through the northwest corner of Sioux County, and ending at the rivers discharge point into the Big Sioux River. The largest and most expansive of the three watersheds in Sioux County is the Lower Big Sioux Watershed. This watershed spans across four states, including Minnesota, South Dakota, Nebraska and Sioux County, Iowa. The Lower Big Sioux watershed follows the course of the Big Sioux River creating the Minnesota/South Dakota border and eventually leading to its discharge point into the Missouri River at Sioux City, Iowa.

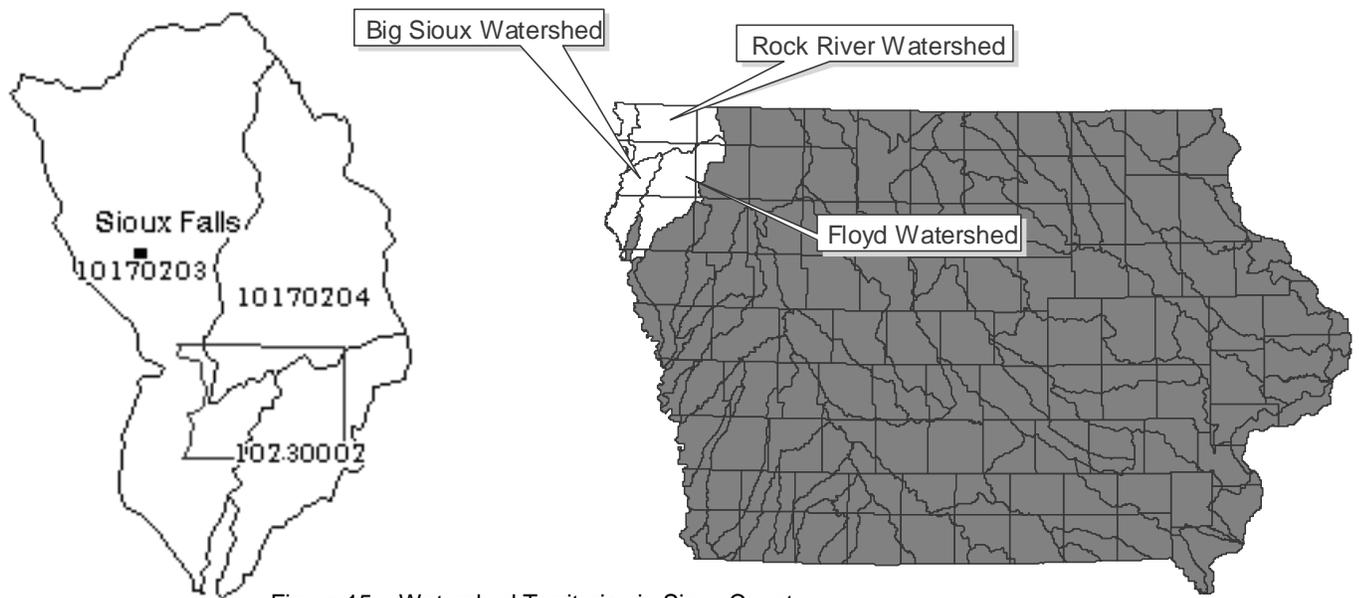


Figure 15 – Watershed Territories in Sioux County

Watersheds affect every part of life as we know it today. Watersheds are one of nature's primary sources of recharging groundwater sources and aquifers referred to in the previous section. This action is necessary so that people can continue to extract water from the ground to provide this basic, yet essential need. In a local example relative to Sioux County, the City of Rock Valley recently underwent an innovative, yet extremely successful watershed project aimed at protecting the city's water supply. In an article from the Iowa Department of Natural Resources titled "*Why Watersheds are Important: A Lesson from the Rock Valley Project*," by J. Michael Gannon and Elizabeth A. Shinall; the extraordinary effects of the impact to a city's water supply and water quality issues are discussed.

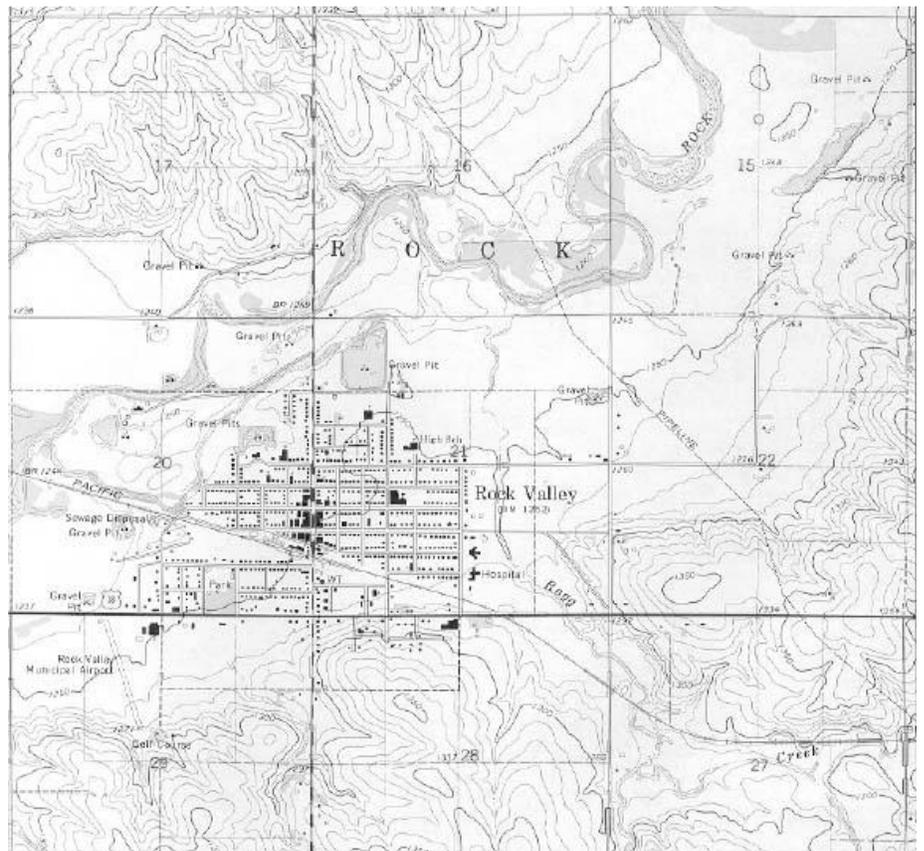
Alluvial aquifers supply drinking water to approximately 23% of Iowans, including the City of Rock Valley. In recent years, there has been a growing awareness of the vulnerability of alluvial aquifers to surface contamination sources to groundwater supplies. To help communities better protect their groundwater resources, the Iowa Department of Natural Resources has implemented a Source Water

Protection Program. The City of Rock Valley was awarded a \$50,000 grant to implement a wellhead protection program which was specifically initiated to target nearby agricultural and animal confinement facilities that were believed to be contributing sources to high recorded levels of nitrates and other human caused contaminants showing up in Rock Valley's water supply from the Alluvial aquifer under the Rock River. To help evaluate the effects of tributary watersheds on alluvial aquifers, two wells were installed in the channel of Rogg Creek, a tributary of the Rock River just southeast of Rock Valley (see map below). Rogg Creek flows within 400 feet of one of Rock Valley's municipal wells and has a watershed of approximately 16 square miles. Land-use in the Rogg Creek watershed is primarily row-crop production along with several livestock facilities. Both are potential sources of contamination and typical of many Iowa watersheds.

Upon completing test wells along Rogg Creek, the site closest to the valley margin had creek levels (outside the well) between 1.0 and 2.2 feet higher than the groundwater levels (inside the well). These results show that surface water from Rogg Creek was in fact recharging the shallow aquifer near the Rock Valley municipal well field, suggesting that land-use practices in a watershed may not only have the potential to impact the quality of its surface creeks and streams, but also impact the groundwater quality of an alluvial aquifer.

Once the problem source was identified, the City of Rock Valley partnered cooperatively with the Sioux County Soil & Water Conservation District to create a wellhead protection plan focused on reducing nitrates in the city wells by using conservation management practices. Native grasses and buffer areas were planted around the wellheads near the agricultural and animal activities. The end result was that the City of Rock Valley's well nitrate levels were reduced by 50 percent. An extensive education program taught local schools and landowners about correct nitrogen management of turf grass and how to implement a phosphorus-free, low nitrogen fertilizer. The project helped the City of Rock Valley save millions of dollars by not having to build a wastewater treatment plant to address these problems.

Figure 16 - Rock Valley, Iowa 7.5' topographic map, U.S. Geological Survey, 1968



URBAN CONSERVATION PRACTICES

Information obtained from a 2004 Natural Resource Conservation Service booklet titled *Conservation Strategies for Growing Communities*, suggests there are several urban conservation practices that could be simply accommodated during pre-construction, construction, and post construction to make a remarkable difference in the amount of erosion and runoff allowed to infiltrate and pollute local water sources. Following is a listing of suggested management practices to support urban conservation.

- **Erosion Control Practices** – after construction, the planting of fast growing vegetation such as grasses and wild flowers can prevent the runoff and erosion of construction sites.

Erosion Control Practices:

- | | |
|-----------------------|------------------------------------|
| 1. Compost Blankets | 4. Rolled Erosion Control Products |
| 2. Grading Strategies | 5. Vegetative Establishment |
| 3. Mulching | |

- **Sediment Control Practices** – is often confused with erosion control, but is actually the trapping of detached soil particles that are already moving in the erosion process.

Sediment Control Practices:

- | | |
|-------------------------|-----------------------------|
| 1. Compost Filter Berms | 5. Inlet Protection Devices |
| 2. Compost Socks | 6. Rock Check Dams |
| 3. Filter Strips | 7. Sediment Control Basins |
| 4. GeoRidge | 8. Silt Fences |

- **Low Impact Development (LID)** – is an alternative approach to traditional storm water management that retains and infiltrates rainfall on-site.

Low Impact Development Practices:

- | | |
|--------------------------|----------------------------------|
| 1. Bioretention Cells | 5. Permeable Paving Alternatives |
| 2. Bioswales | 6. Rain Gardens |
| 3. Infiltration Trenches | 7. Soil Quality Restoration |
| 4. Native Landscaping | |

In the State of Iowa, the Department of Natural Resources (IDNR) does have measures in place to monitor and regulate water discharges through its use of storm water discharge public notices on projects. Furthermore, in accordance with the Clean Water Act, all industrial facilities must complete a National Pollutant Discharge Elimination System (NPDES) permit prior to construction of storm water drainage systems.

NATURAL RESOURCE CONSERVATION SERVICE - CONSERVATION PROGRAMS FOR LANDOWNERS

The Natural Resources Conservation Service (NRCS) provides: “*leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment.*” The NRCS works through county soil and water conservation districts to protect and improve natural resources across the state. Primary areas of assistance and programs include:

- 1) Conservation Technical Assistance
- 2) Conservation Compliance Plans
- 3) Wetlands
- 4) Water Quality

- 5) Resource Conservation and Development (Iowa NRCS has 14 RC&D areas)
- 6) Soil Surveys
- 7) Watershed Program
- 8) CORE 4 (common-sense approach to improving farm profitability while addressing environmental concerns)

In addition to the eight primary fields of technical assistance listed above, the Iowa NRCS is known for its grants and financial assistance programs to assist private landowners implement conservation practices intended to protect the environment, encourage conservation efforts, and educate the public and private sectors on means to sustain, protect, and revive the fragile native landscapes found across the state. NRCS staff serving Sioux County is located at local USDA service centers. Numerous other organizations and agencies provide conservation assistance or programs, including local Pheasants Forever Chapters, Ducks Unlimited, the Nature Conservancy, the Iowa Natural Heritage Foundation, Iowa State University Extension, and Resource Conservation and Development offices.

Following is a brief summary of the technical assistance programs identified in NRCS's "Guide to Conservation Programs for Iowa Landowners." This guide is a reference to financial and technical assistance for conservation on private lands.

Conservation Technical Assistance:

Assists land users to plan and install resource management systems to improve/protect natural resources on their land.

Conservation Reserve Program (CRP):

Reduces erosion, increase wildlife habitat, and improve water quality through the application of conservation plans.

Forest Land Enhancement Program (FLEP):

Assists landowners to develop and implement a forest management plan.

Conservation Security Program (CSP):

Rewards landowners for past conservation work and provide assistance to help develop conservation plans.

State Cost-Share:

Cost-share & incentives on permanent or management conservation practices to control erosion and reduce sediment.

State Watershed Protection Practices:

Addresses local water quality protection needs, including tree plantings, conversion practices, and erosion control.

Iowa Water Protection Fund:

Water quality improvement practices in watersheds above priority lakes and streams, and to protect ground water.

Iowa District Initiative:

Provides funding to accelerate the implementation of federal conservation programs to protect water quality/fragile land.

State Loan Program:

Provides no interest loans to eligible landowners for the construction of permanent soil conservation practices.

Local Water Protection Loan Program:

Permanent soil conservation practices designed to improve water quality and prevent water runoff from open feedlots.

Wastewater Assistance Fund:

Provides low interest loans to repair or replace on-site septic systems. Landowners may borrow \$2,000 to \$10,000.

Conservation Reserve Enhancement Program:

Provides incentives to landowners to establish wetlands for water quality improvement in tile-drained regions of Iowa.

Shelterbelt Program:

Provides funding for tree and shrub planting for energy conservation and wildlife habitat.

Farm Pond Program:

Provides quality fishing opportunities for licensed anglers. IDNR provides fish free of charge if state criteria are met.

General Non-Point Source Program (Low-Interest Loans):

Includes restoration of wildlife habitat, stormwater management, storage remediation, and flood prevention areas.

Livestock Water Quality Facilities Program (Low-Interest Loans):

Includes lagoons, manure management, processing equipment, vegetative filters, and manure management plans.

Wildlife Habitat Incentives Program (WHIP)

A voluntary program providing cost share to private and public landowners to establish wildlife habitat. The NRCS works with participants to develop a wildlife habitat management plan. This plan becomes the basis for entering into a 5 to 10 year agreement with landowners to implement the plan.

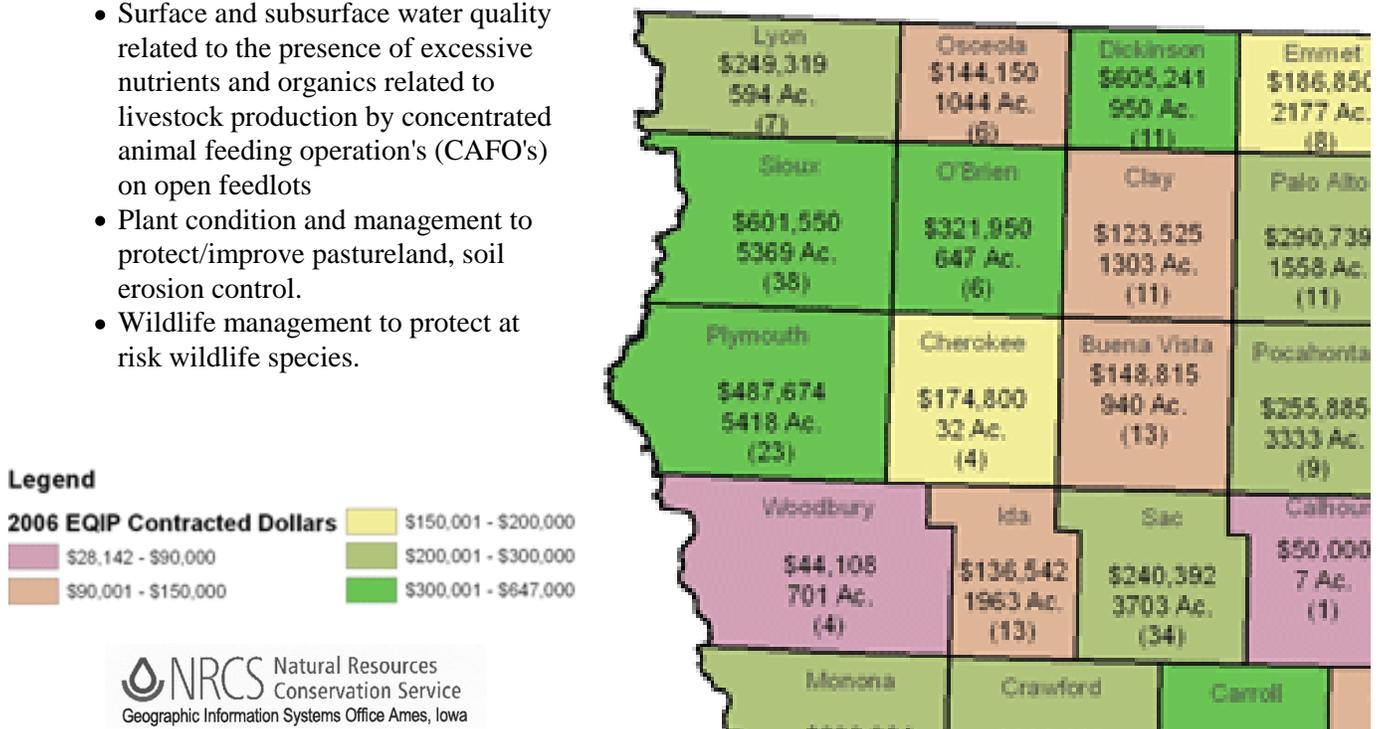
Environmental Quality Incentives Program (EQIP)

EQIP is a voluntary conservation program of the USDA NRCS that promotes agricultural production and environmental quality. This program is available to farmers, and offers financial and technical assistance to install or implement structural and management practices. Conservation practices applied with EQIP funds are to be maintained for the service life of the practice, which may be longer than the term of the EQIP contract. The minimum contract length is one year after the implementation of the last scheduled practice with a maximum length of ten years.

EQIP funding may be approved for the following resource concerns:

- Surface and subsurface water quality related to the presence of excessive nutrients and organics related to livestock production by concentrated animal feeding operation's (CAFO's) on open feedlots
- Plant condition and management to protect/improve pastureland, soil erosion control.
- Wildlife management to protect at risk wildlife species.

Figure 17 – Contracted Dollars through EQIP



Wetlands Reserve Program (WRP)

To develop and implement a conservation plan for restoration of wetlands previously altered for agricultural use. Land that has been owned for one year and that could be restored to wetland conditions. Landowners may restore wetlands with permanent easements, 30 year easements or 10 year contracts. Permanent easements pay 100% of the agricultural value of the land and 100% cost-share for restoration; 30 year easements pay 75% of the agricultural value and 75% cost-share for restoration; 10 year contracts pay 75% cost-share of restoration only. Wetlands were restored, enhanced or created on 6,377 acres in Iowa during FY 2004 with assistance from the Wetlands Reserve Program (WRP). Over 126,000 acres of wetlands have been restored or are in the process of being restored under these programs in Iowa since 1992.

WETLAND EASEMENTS AND ACRES – STATE OF IOWA 1992-2005

Updated February 2005

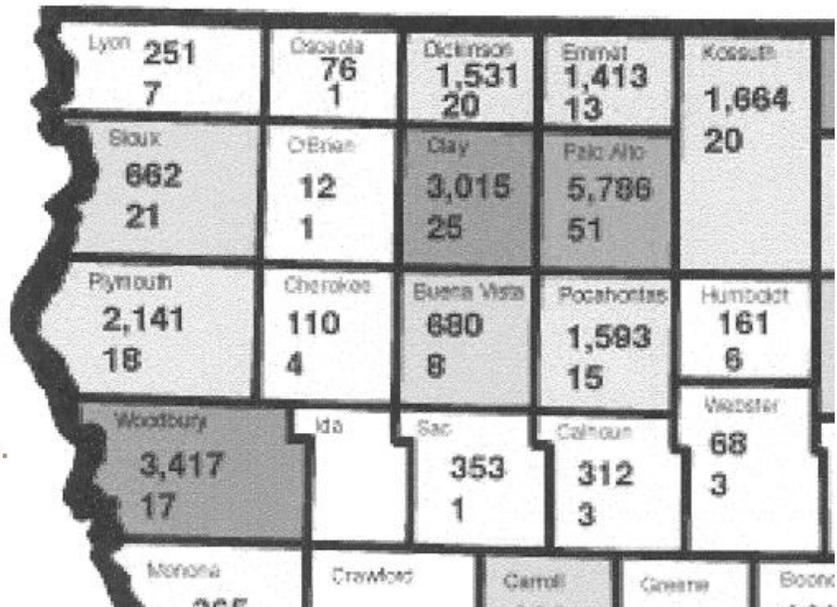
Figure 18 – Number of Acres and Easements in Wetland Reserve Program

Sioux County

- 662 Wetland Reserve Program Acres
- 21 Wetland Reserve Program Easements



Top Figure Reflects Acres.
Bottom Number Reflects Easements.



Chapter 10. PARKS & RECREATION

Sioux County offers an abundance of county parks and recreational areas. Sioux County most notable natural resource providing a back drop for many of these park areas is the Big Sioux River corridor which creates the county's western border. Additionally, there are public wildlife management areas and other county parks which cater to the desires of sportsmen, hikers, and nature enthusiasts alike. Recreational resources provide many benefits and amenities to the individual, family, and the county's overall quality of life. For Sioux County to present an attractive and beautiful setting for residents to live in and guests to visit, it must have a sound system of parks and a variety of recreational activities. The Sioux County Conservation Board works hard to maintain a viable parks system, and there are many active and passive recreational activities for residents of Sioux County to enjoy. However, these Sioux County must realize that it cannot afford to allow these recreational "amenities" to remain static. As the composition of the county changes over time, so must the parks systems change to meet new and growing demands. To better understand the quantity and quality of recreational opportunities present in Sioux County, an itemized listing of each county park or facility is included below.



COUNTY PARKS AND RECREATION AREAS

Alton Roadside Park

This 11 acre park is ideally situated at the junction of Iowa Highways 10 and 60, at the northern city limits of Alton. Facilities provided include complete picnic sites, an enclosed shelter, playground equipment, toilets, and water supply. Also, camping is permitted. The area is adjacent to a small lake, which enhances the beauty of the park.

Big Sioux Park

This park is 278 acres, and is located adjacent to Oak Grove Park, along the Big Sioux River. The flat ridge along the east edge of the park lends itself to a panoramic view of the Big Sioux River Valley. A wide variety of wild flowers may be viewed on the hillsides during spring and summer. Facilities available include tables, grilles, trash receptacles, hiking trails, and pit toilets. There are several picnic sites located at various observation points. A camping area, located in the upper portion of the park provides concrete parking pads, 39 electric hookups, 9 non-electric sites, and a modern comfort station. There is also an enclosed shelter, which may be reserved on a rental basis.

Fairview Area

This 94 acre site is located in the northwest corner of Sioux County, adjacent to County Highway A-54. It contains a 10 acre water impoundment, which has been stocked with crappie, channel catfish, bass and bluegill. The remaining portion of this site contains dense timber and game cover. This area is recognized locally as containing some of the better deer habitat in Sioux County. It will be retained in its existing natural condition providing excellent hunting and fishing opportunities. Other activities, including horseback riding and nature study may be enjoyed within this area.

Sioux County Historical Site (Highway 12)

This small rest area and county park is located 2½ miles south of Hawarden on Iowa Highway 12. This site is the point of beginning for the original survey of Sioux County, Iowa. It is located on the high bluff overlooking the Big Sioux River.

Nassau Wildlife Area

This is a four (4) acre abandoned gravel quarry located three miles south of Alton. The park contains a shallow 2 acre pond with a few trees and brush around the water's edge. The remaining portion contains various native grasses serving as a wildlife area.

Oak Grove Park

Oak Grove Park, probably one of the county's more notable recreational amenities, is a 101 acre picturesque outdoor recreation area located 6½ miles northeast of Hawarden on County Highway K-18. Approximately 50% are rolling hills and about 75% consist of dense timber. It is adjacent to the Big Sioux River and provides excellent fishing access. There are two large outcroppings of Sioux Quartzite in the southwest corner and a mound of slag, which is the remains of a 100 year old coal bed, which provide geological interest. Facilities available to the park users include tables, grilles, trash receptacles, water supply, pit toilets, and hiking trails. There is a camping area located in the park, which provides concrete parking pads, 39 electric hookups, 3 non-electric sites and a modern comfort station. The park contains two open shelters with lights and electric outlets. Also, an enclosed all weather shelter is located in the upper area of the park and may be rented. Oak Grove Park is leased from the IDNR and is maintained in conjunction with Big Sioux Park.

Otter Creek Public Area

This area consists of a 56½ acre tract containing a 10 acre pit and Otter Creek. It is located approximately 4½ miles north of Boyden on County Highway L-14. The pit has been stocked with channel catfish, but contains several other species. This area is available for picnicking, fishing, nature studies, and hunting in designated areas.

Otter Creek- Vreeman Tract (B-14)

This tract of native prairie grasses and upland brush is located approximately 5 miles to the east of Otter Creek Public Area on County Highway B-14. This tract of public hunting ground is 80 acres.

Otter Creek- Vreeman Tract (L-14)

Another tract of native prairie grasses and dense timber, this property was acquired adjacent to the original Otter Creek Public Area. This new expansion of public land includes an additional 74 acres.

Rock River Access

This river access is located two miles northeast of Rock Valley along the Rock River and is comprised of 277 acres of bottomland. It is totally undeveloped in order to serve primarily as a wildlife habitat area. Its principle attractions are hunting and fishing.

Rock River Access- Abma Tract

Situated just north of the Rock River Access, the Abma Tract is an expansion of this native grasses and bottomland timber adjacent to the Rock River. The Abma Tract consists of 240 acres of land.

Rock Sioux Access

This access is located 1½ miles north of Oak Grove Park and is leased from the Iowa Department of Natural Resources. It contains 30 acres of dense timber and provides fishing access where the Rock River converges with the Big Sioux Rivers. It is established as a game management area; thereby permitting hunting in compliance with Iowa laws.

Rock Wildlife Area

This 188 acre irregular shaped tract is located northwest of Rock Valley and contains several shallow potholes, along with scattered trees consisting of elm, cottonwood, ash and willow. It is designated as a wildlife area, thereby permitting hunting in compliance with Iowa laws.

Settlers Canoe Access

This is a 1½ acre site of flat bottomland adjacent to the Big Sioux River, located directly across the river from Fairview, South Dakota. It provides access to the river for canoes and other small boats.

Winterfeld Boat and Fish Area

This area is located on the north edge of Rock Valley, just off of County Highway K-30. It is a 22 acre reclaimed gravel quarry, which contains a 17 acre lake. This lake has been stocked primarily with channel catfish, but also contains several other species. This area also provides boating access to the lake and has an open shelter with picnic facilities.

STATE PARKS

Of the 71 state parks found in the State of Iowa, none are located within the boundaries of Sioux County. However, within approximately 75-100 miles of Sioux County lies 13 state parks which offer the residents of Sioux County an opportunity to experience some of the most unique and pristine natural landscapes that the State of Iowa has to offer. Below is a listing of the state parks within a modest driving distance of Sioux County.

- Stone State Park – Woodbury County (near the City of Sioux City)
- Wanata State Park – Clay County (near the City of Peterson)
- Fort Defiance State Park – Emmet County (near the City of Estherville)
- Elinor Bedell State Park – Dickinson County (near the City of Spirit Lake)
- Mine-Waukan State Park – Dickinson County (near the Minnesota State Line)
- Pikes Point State Park – Dickinson County (near the City of Okoboji)
- Claire Wilson State Park – Dickinson County (near the City of Arnolds Park)
- Emerson Bay State Park – Dickinson County (in the City of West Okoboji)
- Lower Gar Access State Park – Dickinson County (in the City of Arnolds Park)
- Marble Beach State Park – Dickinson County (in the City of Orleans)
- Templar Park State Park – Dickinson County (in the City of Orleans)
- Trappers Bay State Park – Dickinson County (in the City of Lake Park)
- Gull Point State Park – Dickinson County (in the City of Wahpeton)

SIoux COUNTY CONSERVATION BOARD

The Sioux County Conservation Board is headquartered at the Conservation Office in Oak Grove Park, north of Hawarden. Current Conservation Director is Rob Klocke with Assistance from Sioux County's Naturalist, Sunday Ford. Sioux County Conservation Board members include:

Gordon Pottebaum – Chairperson
 Bruce Schomaker – Vice Chairperson
 Don Brommer – Secretary
 Jerry Jensen – board member
 Dave Meylink – board member

The Sioux County Conservation Board works diligently to not only maintain and protect its current park and recreation areas, but also to create a system of recreational and educational programs for the youth and general public. Some of the recreational and educational programs offered to the residents of Sioux County are identified below:

Youth Outdoor Skills Day

Sponsored by the Sioux County Sportsmen's Club with help from the Sioux County Conservation Board, this activity includes a day of learning hunting and trapping skills. This event is offered to the youth ages 18 and under at Oak Grove Park.

Women in the Outdoors Program

An outdoor women's workshop sponsored by the local National Wild Turkey Federation Chapter and Conservation Boards of Sioux, O'Brien, and Lyon Counties was held at Lake Pahoja. This workshop is intended to introduce women to outdoor activities such as GPS, wood carving, archery, dutch oven cooking, self defense, first aid and turkey hunting.

Trick or Treat at Oak Grove Park

Sponsored by the Sioux County Conservation Board and Hawarden Recreation Department, this event is intended for children and parents to participate in trick or treat activities with campers at Oak Grove Park. Other activities also include a night hike and bonfire.

Youth Pheasant Hunt

The Sioux Prairie Pheasants Forever Chapter, with help from the Sioux County Conservation Board, conducts its annual youth pheasant hunt for those aged 12-15 and completed a hunter safety course.

PARKS AND RECREATION RESPONSIBILITIES

Sioux County's parks and recreational responsibilities include the Conservation Board's maintenance of all county parks and recreation areas, in addition to support for sponsored County Conservation programs. Recreation needs and priorities of the county are considered and funded by the Board of Supervisors, and other private or public funding sources. The County Conservation Board staff assists daily operations.

In addition to publicly provided parks or open space through Sioux County, the private sector also plays an increasing role in providing future recreation amenities. Generally speaking, the private sector in Sioux County provides recreation uses typical of golf courses, camping, biking, and other outdoor activities.

The Iowa Department of Natural Resources is the agency which is primarily responsible for provisions of recreational funding programs and creation and maintenance of existing facilities at a statewide level. The Iowa Department of Transportation, Iowa Department of Economic Development, The Iowa Natural Heritage Foundation, State Archeologists, and the State Historical Society are other state agencies which also exert direct and indirect influence on state recreational funding and programs.

DEMAND FOR RECREATIONAL ACTIVITIES

For many years the demand for outdoor recreation has been rapidly increasing. One of the most often used and least understood concepts in outdoor recreation planning is the concept of “demand”. The magnitude of demand is primarily influenced by eight (8) socioeconomic factors.

- 1) **AGE:** The amount and type of recreation one pursues is related to age. The older the participant, the fewer and more passive are the pursuits.
- 2) **INCOME:** The number of recreation pursuits of an individual is related to income. The higher the income, the more numerous the pursuits, and the more active are pursuits in those activities requiring relatively high expenditures for equipment.
- 3) **EDUCATION:** Education affects recreation participation in much the same way as income. The higher one's educational attainment, the more numerous the pursuits.
- 4) **OCCUPATION:** The number and variety of leisure activities are related to occupation and occupational prestige. The higher an individual's occupational prestige, the more varied and active the pursuits.
- 5) **RESIDENCE:** Suburbanites are more active and pursue a greater variety of recreation pursuits than do urban dwellers, which in turn, have a more active participation rate than do those who live in rural areas.
- 6) **MOBILITY:** Outings tend to be weekend (overnight) or all day excursions. The outing destination is usually a public, non-urban area within a three-hour drive from the point of departure.
- 7) **OPPORTUNITY FOR ACTIVITIES:** Increasing the number of recreation facilities within a given area may create a geometric increase in recreation participation. When the facilities are provided, people use them; their presence may in fact, create a demand.
- 8) **NATURAL CHARACTER:** Leisure patterns, leisure items, and leisure facilities are often used as status symbols (conspicuous consumption, conspicuous display). Different age groups present the need for specific recreational activities. These activities can be further defined as active or passive.

ADDITIONAL CONSIDERATIONS FOR PARKS AND RECREATION PLANNING

As land costs become increasingly expensive, acquisition of parks or recreation areas can become challenging, requiring local governments to have plans in place to keep up with new resident demands, but also consider funding mechanisms precisely related to desired service levels.

- What is the citizen demand for various parks and recreation resources? How much or how often are county residents and visitors using parks, bike trails, natural resource areas, etc?
- What is the capacity for various recreation resources? How many residents and visitors can a park or trail system accommodate? Or put another way, if there is demand for future park or recreation areas, how many will facilities or acres of land will Sioux County need to meet that demand?
- Active parks and recreation areas (i.e. sports fields) require a substantial amount of land due to their size and parking requirements.

Open space is considered separate from other parks and recreation facilities due to diversity of needs, uses, forms, and understanding of this concept. Open space is defined as broad term for land largely free of residential, commercial, and industrial development that can provide wildlife habitat, access to recreation, scenic viewscapes, or passive recreation. Open space is not considered part of the demand/capacity standards because open space serves purposes beyond accommodating recreational needs, and in many cases is a component of parks planning with values that lay outside of typical parks and recreation demands. Benefits that can accrue solely from open space include:

- Economic benefits – open space can enhance the quality of life which in turn attracts business and improves property values
- Fiscal benefits- in some cases, it costs the local government less to purchase property and conserve it than to pay for infrastructure and services required for development, similarly in some cases the purchase of watersheds can lead to decreased treatment costs.
- Protected river corridors keeps construction out of the floodplain and prevents losses to personal property
- Environmental and aesthetic benefits

STATE OF IOWA PROJECTED RECREATION TRENDS

According to the Iowa Department of Natural Resources' 2001 "SCORP" Plan, or State Comprehensive Outdoor Recreation Plan, the state believes there are several factors including a growing minority population, a shifting population from rural to urban, and a continued aging population which will all have significant impacts on the projected needs and trends of future recreational activities in Iowa.

Projected implications and recreational trends facing the future of recreational planning include:

Addressing minority needs

- Persons raised in other cultures will bring new outdoor recreation pursuits that previously may not have been in demand in Iowa.

An increasing shift from rural to urban settings

- Demand for recreational opportunities "close to home" will continue to increase.
- Surveys consistently show urban dwellers participate more frequently in outdoor recreation pursuits than do rural residents.
- Demand for development on lands adjacent to or near urban areas often lead to pricing of property to where it becomes prohibitive for development of recreational activities.

A continual aging of the population

- Recreation opportunities must be made available to meet the needs for more passive leisure time opportunities.
- Opportunities for persons with disabilities will most likely need to increase.
- Many feel that more recreational opportunities aimed at the younger segments of the population will add incentives for those to remain in the state.

Iowa's Issues and Priorities Facing Outdoor Recreation

When planning for future outdoor recreation, it becomes necessary to identify issues and priorities facing outdoor recreation in Iowa. Considering the wide array of interests in outdoor recreation, what is an issue or priority to one group may be of little concern to another. The SCORP Committee was formed with the intention of bringing together into one group, a very diverse committee of persons with a strong interest in outdoor recreation, representing every spectrum of outdoor recreation possible. The following is a list of specific outdoor recreation issues that should be given special attention as developed by the SCORP Committee.

- Better marketing of outdoor recreational opportunities using the latest technologies.
- Develop partnerships between various agencies, special interest groups and government organizations, state and local, to best preserve and promote outdoor recreational opportunities.
- Educate all ages, with an emphasis on the young, in outdoor skills and stewardship ethics.
- Educate public and policy makers on the importance of outdoor recreation.
- Acquire more lands and waters representative of various ecological communities and landforms throughout the state, and manage these areas carefully to be left in their present state.
- Recreational developments should be appropriate uses of the particular land area and should incorporate the needs of protecting sensitive natural areas.
- Need to renovate and maintain existing facilities to ensure there is equal access for all users.

Iowans have a wide variety of outdoor recreation opportunities to choose from and several general surveys have been conducted to determine what outdoor recreation activities Iowans prefer and how often they participate in them. Other specific surveys have been undertaken to gather detailed information regarding outdoor recreation activities. These surveys serve as a vital source in understanding attitudes and opinions toward outdoor recreation issues in Iowa. This information can be used for a variety of purposes including future outdoor recreation development and funding. The Iowa Department of Natural Resources commissioned the Center for Social and Behavioral Research (CSBR) at the University of Northern Iowa to conduct a survey to assess Iowans' participation in outdoor recreational activities and their opinions about the protection and management of Iowa's natural resources. The outdoor recreational activities with the highest participation rates were:

- Picnicking (72.9%)
- Hiking or nature walks (61.1%)
- Swimming in a pool (48.4%)
- Fishing (45.3%)
- Nature studies such as bird watching (41.3%)

With the exception of picnicking, participation rates varied across age groups. Generally, participation was lower among those aged 65 or older, but nature studies such as bird watching were more common among older respondents. One-fifth (21.3%) of those surveyed reported outdoor

recreational activities were inhibited by limited or unsuitable recreational areas or facilities in Iowa. Commonly mentioned inhibited activities were: biking on paved trails, power boating or water skiing, hiking or nature walks, and fishing.

Approximately one-third of those surveyed were unsure of the fishing quality in Iowa's state parks and recreational areas. Similar percentages were unsure of how present fishing quality compares with that of 5 years ago.

Iowans report open spaces are important to their quality of life, and they support public ownership of these spaces. Generally, the public's opinion is that spending more money to manage and protect natural resources is important.

Chapter 11. POPULATION & HOUSING

Sioux County is unique in regards to population and housing trends unfamiliar to most other counties in Northwest Iowa. Being one of a very few growing rural counties in Iowa brings with it new people, migration, income, successes, and challenges that all affect the population and housing of the area as explored in this next section of this plan. Shifts and growth in population play a critical role in the planning process. Analysis of past trends and current population structure is important in making future population projections. Those projections, along with information about population characteristics such as age and household size, are fundamental in considering the need for future infrastructure improvements and the need for the development of residential, commercial and industrial areas. This section will examine past trends, current structure, future projections, and discuss their impact on the future of Sioux County.

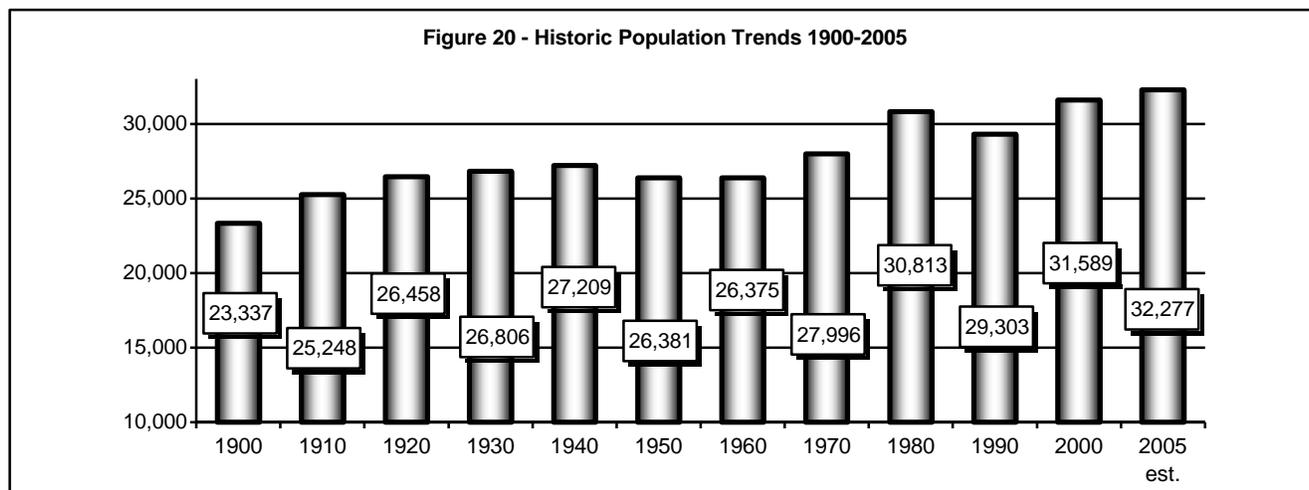
PAST POPULATION TRENDS

Sioux County's leaders, along with all of those who call Sioux County their "home" have seen a small rural county develop over the course of the past 100 years into the bustling agricultural and "small urban" center it has become today. Sioux County, first recorded an official federal census in 1860 with a county population of 10 residents. However, it did not take long for early settlers to find Sioux County. By 1900 the county's population grew to a recorded census of more than 23,300 residents. Over the past 100 years, Sioux County has seen periods of growth and decline, however there have not been extreme fluctuations in the overall population. The changes in population in Sioux County have been gradual and usually reflective of larger national or regional trends. For example, Sioux County showed signs of a growing population throughout the 1960s and 1970s. However, the 1990 census data shows the impact of the 1980s nationwide farm crisis and economic recession that impacted the entire state of Iowa as it did Sioux County. Actually, Sioux County fared well during the tough times of the 1980s in comparison to many other rural agricultural counties in Iowa that experienced declines in population in excess of 10, 15 or even 20 percent. The testament to perseverance and changing to reflect trends in the agricultural economy and rural commerce is shown in the positive growth experienced during the 1990s decade and early into the 2000 decade.

Table 11 - Historic Population Trends, Sioux County

YEAR	1900	1910	1920	1930	1940	1950
POPULATION	23,337	25,248	26,458	26,806	27,209	26,381
YEAR	1960	1970	1980	1990	2000	2005 est.
POPULATION	26,375	27,996	30,813	29,903	31,589	32,277

Sioux County's greatest period of growth was experienced between 1960 and 1980 when the county grew by 4,438 residents or 16.8% over 20 years. The greatest period of population decline for Sioux County was between 1980 and 1990 when the population slipped by 910 residents or 3.0 percent. Recent gains in population are indicating another period of aggressive growth for Sioux County with an impressive 5.6 percent increase during the 1990s and another 2.2 percent gain from 2000 to 2005.



RURAL VERSUS URBAN

Roughly 73 percent of Sioux County's current population resides in one of the county's thirteen (13) incorporated cities, which range in size from Matlock (population 84) to Sioux Center (population 6,513). Sioux County's cities have fared better in attracting and retaining residents over the past 20 years than the county's unincorporated, or "rural" area. Although the overall county population decreased during the 1980s, the cities added 309 additional residents while the rural population declined by 1,219 residents or 11.4 percent. Once the economy rebounded in the 1990s and Sioux County once again began to grow and prosper the disparity or gap between the rural and urban population became even more pronounced. Between 1990 and 2000 the county's rural population declined 4.3 percent or 406 residents. However, the urban population in Sioux County increased more than 10 percent with an additional 2,092 residents living within the cities. Similarly, this trend has continued to widen the urban vs. rural gap between 2000 and 2005 as well.

<u>Year</u>	<u>Urban</u>	<u>Rural</u>
1980	20,098 (65.2%)	10,715 (34.8%)
1990	20,407 (68.5%)	9,496 (31.8%)
2000	22,499 (71.2%)	9,090 (28.8%)
2005	23,435 (72.6%)	8,842 (27.4%)

Individually, population trends among Sioux County's cities have varied widely over the past 20 years. It seems as if the urban vs. rural shift in population has affected the population growth between the cities in Sioux County similar to the shifts from the unincorporated population to the cities comparison. Of the thirteen cities in Sioux County, there are only four communities with a population of greater than 2,000 residents. The shifts in population from smaller cities to the larger "small urban" centers has become very pronounced in Sioux County. Since 1980, communities such as Hawarden and Boyden have actually seen their populations decrease slightly. On the other hand, small cities such as Ireton grew from 588 in 1980 to 592 in 2005. Similarly, the City of Hospers grew from 655 residents in 1980 to 674 residents in 2005. Also, the communities of Alton, Hull and Rock Valley have experienced modest increases in population gains. However, when you compare the population increases of every city in Sioux County to the growth experienced in the county's two

largest cities, Orange City and Sioux Center, it becomes evident where the growth is occurring. These two communities were both listed as having a 1980 population of 4,588 residents. Over the past 25 years, Orange City has increased its population by nearly 26 percent to 5,775 residents. Even more impressive is the population gain of 42 percent during this same time in the City of Sioux Center. Sioux Center's current population is 6,513 residents.

Table 12 – Percentage of Population Change of Cities in Sioux County

	2005	2000	1990	1980	Change 1980-2005	% Change 1980-2005
Sioux	32,277	31,589	29,903	30,813	1,464	4.8%
Alton	1,117	1,095	1,063	986	131	13.3%
Boyden	669	672	651	708	-39	-5.5%
Chatsworth	90	89	103	110	-20	-18.2%
Granville	325	325	298	336	-11	-3.3%
Hawarden	2,440	2,478	2,439	2,722	-282	-10.4%
Hospers	674	672	643	655	19	2.9%
Hull	2,039	1,960	1,724	1,714	325	19.0%
Ireton	592	585	597	588	4	0.7%
Matlock	84	83	92	109	-25	-22.9%
Maurice	265	254	243	288	-23	-8.0%
Orange City	5,775	5,582	4,940	4,588	1,187	25.9%
Rock Valley	2,852	2,702	2,540	2,706	146	5.4%
Sioux Center	6,513	6,002	5,074	4,588	1,925	42.0%
Rural	8,842	9,090	9,496	10,715	-1,873	-17.5%

TOWNSHIPS

The following table includes a sample of demographic statistics relative to the rural townships in Sioux County. Most data sources do not report demographic data for townships, rather just county or larger city statistics. Population statistics and other data are often times difficult to gather at the township level. The source used to document this information is the city-data.com web site. It is expressed that this website is intended for informational use only and does not rely upon the accuracy or timeliness of the data presented on the website. The data has been presented from multiple governmental and commercial sources. In compiling the township listing and data for Sioux County, it was discovered that of the twenty-three townships in Sioux County, this data source only had information relative to eighteen of these townships.

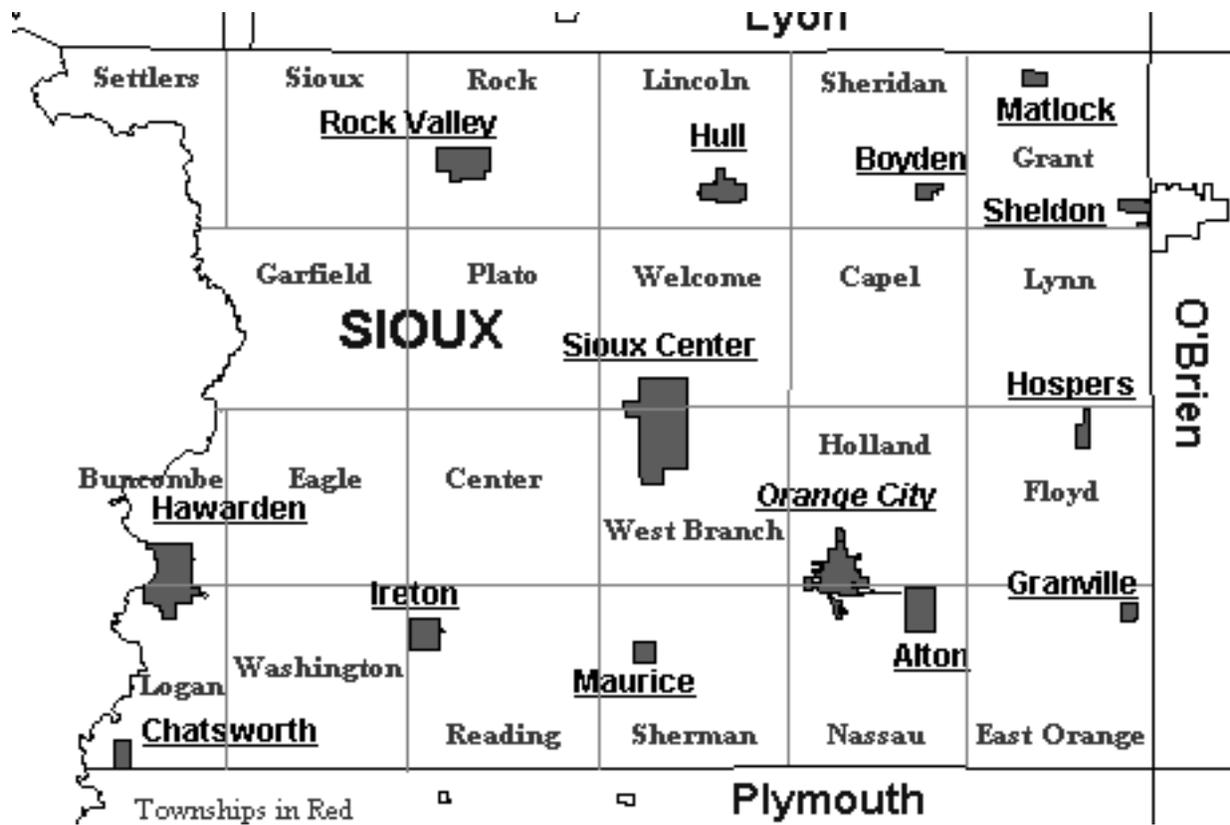
Table 13 – Land Mass and Rural Population of Sioux County Townships, 2000

Township Name	Land Mass	Water Mass	Rural Population	Cities
Buncombe -	NA	NA	NA	Part of Hawarden
Capel Township -	36.0 sq.mi.	0.0 sq.mi.	483	none
Center Township -	35.8 sq.mi.	0.0 sq.mi.	400	none
Eagle Township -	36.0 sq.mi.	0.0 sq.mi.	276	none
East Orange Township -	NA	NA	NA	Granville
Floyd Township -	35.7 sq.mi.	0.0 sq.mi.	1,106	Hospers
Garfield Township -	36.4 sq.mi.	0.0 sq.mi.	298	none
Grant Township -	36.0 sq.mi.	0.0 sq.mi.	112	Matlock & part of Sheldon

Township Name	Land Mass	Water Mass	Rural Population	Cities
Holland Township -	NA	NA	NA	part of Orange City
Lincoln Township -	35.4 sq.mi.	0.0 sq.mi.	2,495	Hull
Logan Township -	20.5 sq.mi.	0.3 sq.mi.	782	Chatsworth & part of Hawarden
Lynn Township -	NA	NA	NA	none
Nassau Township -	35.9 sq.mi.	0.0 sq.mi.	1,143	Alton & part of Orange City
Plato Township -	35.7 sq.mi.	0.0 sq.mi.	527	none
Reading Township -	36.2 sq.mi.	0.0 sq.mi.	862	Ireton
Rock Township -	35.5 sq.mi.	0.1 sq.mi.	933	Rock Valley
Settlers Township -	17.5 sq.mi.	0.0 sq.mi.	131	none
Sheridan Township -	35.4 sq.mi.	0.0 sq.mi.	1,107	Boyden
Sherman Township -	36.2 sq.mi.	0.0 sq.mi.	618	Maurice
Sioux Township -	NA	NA	NA	none
Washington Township -	36.3 sq.mi.	0.0 sq.mi.	202	none
Welcome Township -	35.8 sq.mi.	0.0 sq.mi.	914	part of Sioux Center
West Branch Township -	35.8 sq.mi.	0.1 sq.mi.	1,122	part of Sioux Center

Note: The term “rural population” may include rural residents and residents of small cities located within each township, based upon the definition of rural population by the data source. The term “rural population” does not include any city over 2,500 in population.

Figure 21 - Township map of Sioux County



Source: IAGenWeb: Greater Sioux County Genealogical Society (GSCGS)

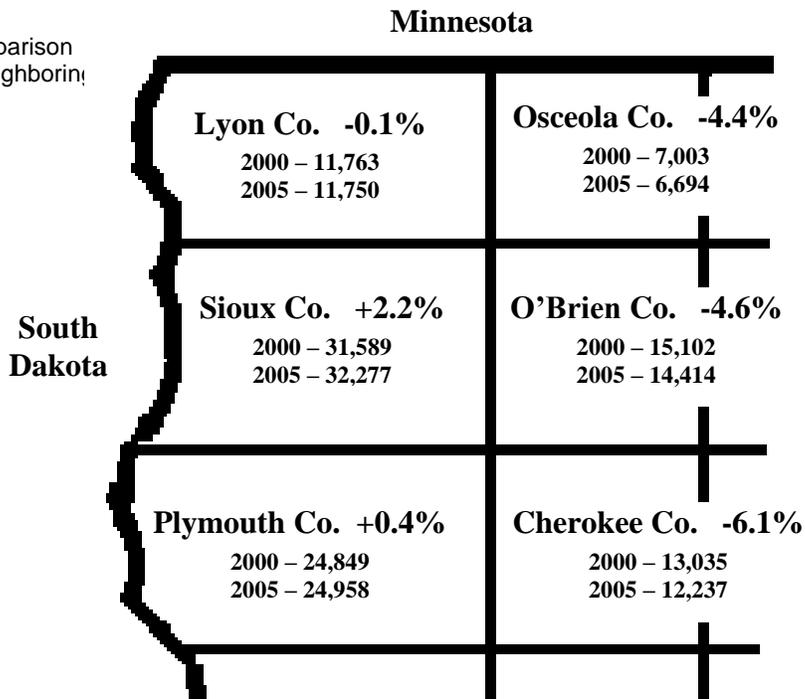
The same source documenting township data from the previous page also identifies the following eight rural churches located in Sioux County; Lebanon Church, Saint Paul Church, Newkirk Reformed Church, Netherland Reformed Christian Church, Saint Johns Lutheran Church, Saint Johns Church, Middleburg Free Grace Reformed Church, and Trinity Christian Reformed Church. Additionally, it is reported the following seven cemeteries are located in the rural townships of Sioux County. These cemeteries include the Lebanon Christian Reformed Church Cemetery, Newkirk Cemetery, Valley View Cemetery, Nassau Township Cemetery, Sioux Cemetery, Boyden Cemetery, and the Bragstad Family Cemetery.

CURRENT POPULATION STRUCTURE

As of the 2000 Census, Sioux County has a total population of 31,589 persons, of which 9,090 are rural residents. From 1990 to 2000, the rural population of Sioux County decreased from 9,496 to 9,090, a difference of 406 residents or a 4.3 percent decline. This trend alone is not unique in that only a few counties in the entire state experienced an increase in the rural population. Every county across northwest Iowa experienced a loss of rural population, except for Dickinson County which grew due to the tourism nature of the county. This trend of a declining rural population is continuing throughout the current decade as well. Between 2000 and 2005, population estimates released by the U.S. Census Bureau indicate a projected rural population of 8,842 or a decline of 2.7 percent. The continued decline or shifting of the rural population in Sioux County will become a key factor for future community and economic development efforts.

Although the rural population of Sioux County may be declining or “shifting”, the overall population of Sioux County is continuing to increase. As seen in the map below, Sioux County experienced the largest overall growth with a 2.2% increase between 2000 and 2005. Besides Sioux County, only Plymouth County (adjacent to the Sioux City metropolitan area) showed an increase in population. The rural counties of Osceola, O’Brien and Cherokee all experienced significant declines in total population. This trend goes to support the overall continuing “rural to urban” shift occurring within the state of Iowa, similar to trends occurring within Sioux County.

Figure 22 - 2000-2005 comparison population of neighboring counties

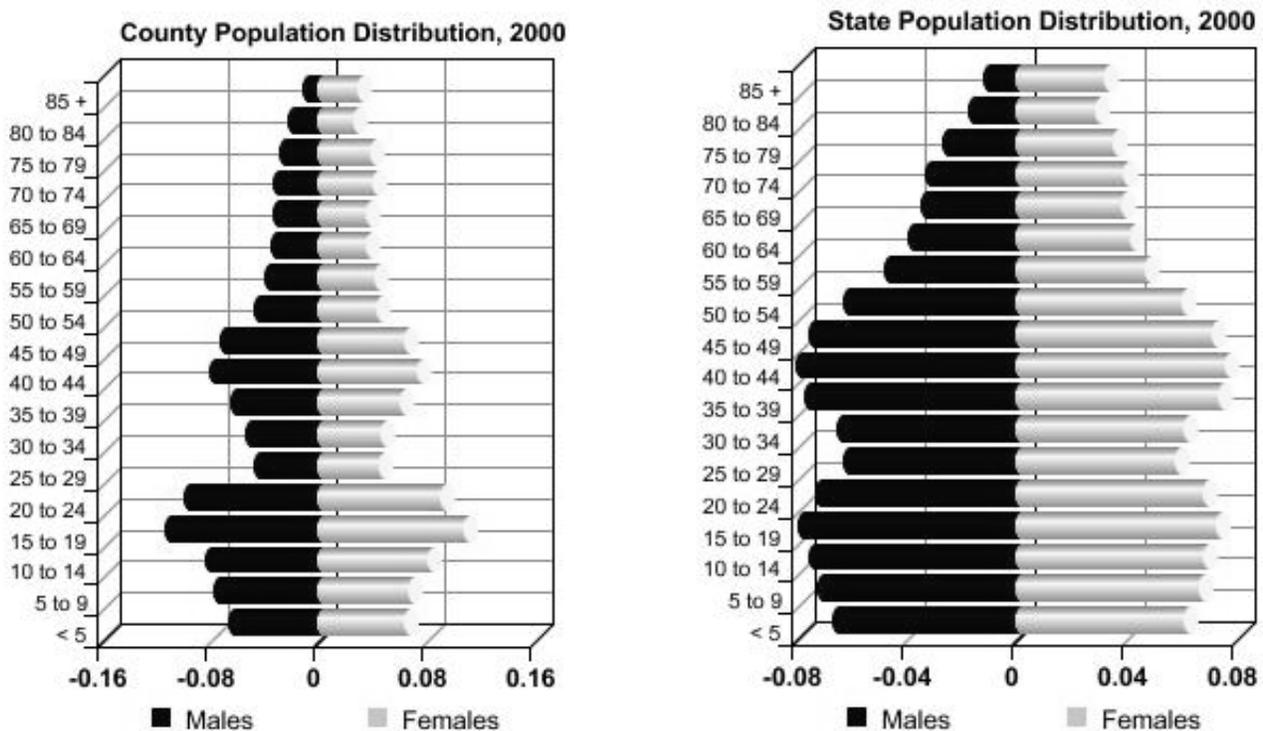


The median age of 32.8 years for Sioux County residents is substantially lower than that of the State of Iowa which is at 36.6. Median age in Sioux County has consistently been lower, on average, than that of nearly every other county in northwest Iowa, as well as the state’s average. This statistic bodes well for the future of Sioux County indicating a healthy mix of younger families residing in Sioux County, versus an aging senior population in other rural northwest Iowa counties. Of the factors that may be contributing to the growing youthful population in Sioux County may relate back to the geographic location of Sioux County which is located nearly halfway between the two larger metropolitan areas of Sioux City, Iowa and Sioux Falls, South Dakota. Within an hours drive and these younger families can experience the fun, entertainment, dining and cultural resources of the metropolitan cities, but yet still maintain the quality of life of residing in Sioux County.

Nearly 15 percent of the county's 2000 population or 4,753 persons meet the U.S. Census’ definition of elderly, which includes persons aged 65 and older. On the other hand, there is 17.1 percent of the county’s population which is considered the youth in Sioux County, or those persons under the age of 18. As of 2000, there were 8,567 youth living in Sioux County. Both of these age demographic sectors show clear but distinctly different needs for special consideration when providing future county services and planning future land use growth decisions.

Of the total population, 49.0 percent, or 15,496 are male, while 51.0 percent or the remaining 16,096 residents are female. This proportion of males to females is typical of the area due to the longer life expectancy of females. As seen in the chart below though, there appears to be a slightly stronger presence of males in Sioux County in the teenage and middle age groups. Conversely, there is a significantly stronger presence of females in Sioux County in the 70 and older age brackets. This trend would go to support the statistic of women having the longer life expectancy.

Figure 23 - Age Distribution Graph, 2000



Source: Office of Social & Economic Trend Analysis www.seta.iastate.edu

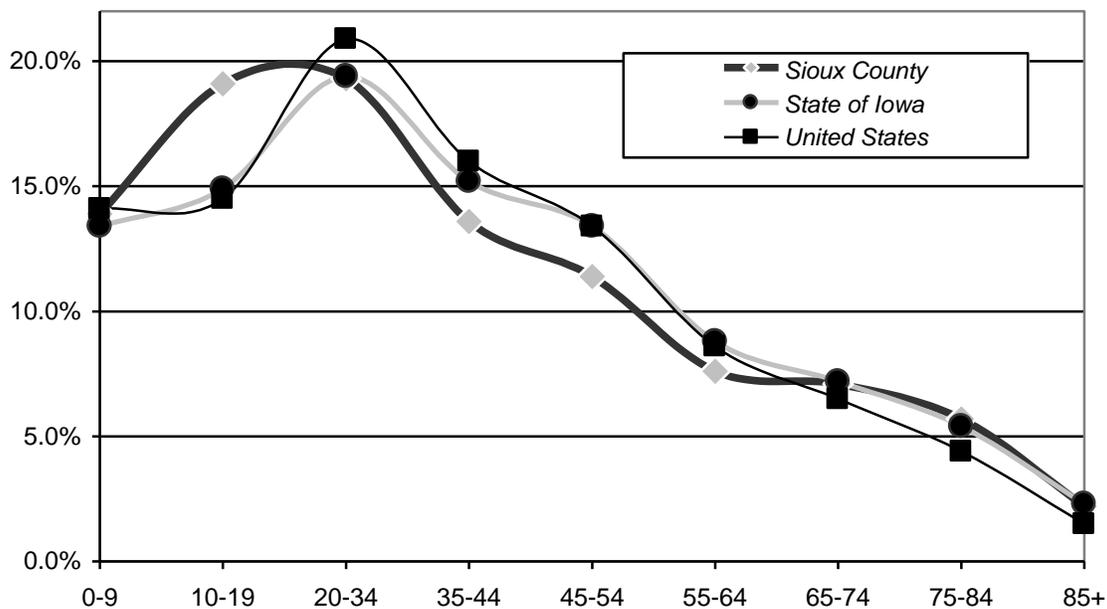
Support provided by: Iowa State University, the Agriculture Experiment Station, ISU Extension Community and Economic Development, College of Agriculture, Department of Economics, and Department of Sociology.

Table 14 - Age Distribution of Population, 2000 (Sioux County and Iowa)

Age Cohort	Sioux County	Percent	State of Iowa	Percent
0-9	4,385	13.9%	391,016	13.4%
10-19	6,025	19.1%	436,967	14.9%
20-34	6,099	19.3%	566,723	19.4%
35-44	4,298	13.6%	445,199	15.2%
45-54	3,610	11.4%	392,794	13.4%
55-64	2,419	7.6%	257,412	8.8%
65-74	2,254	7.1%	211,935	7.2%
75-84	1,802	5.7%	159,160	5.4%
85+	697	2.2%	65,118	2.3%
Total	31,589	100.0%	2,926,324	100.0%

Source: U.S. Census Bureau, 2000 Census

Figure 24 - Age Distribution comparison, Sioux County, Iowa, United States, 2000



The 2000 Census indicated 879 or 2.7% of the county's residents were members of a minority race. More than 97 percent of the county's population were identified as Caucasian, while 97 residents were American Indian, 97 individuals are Black or African American and 226 additional residents are identified as Asian. According to statistics, there are 169 persons that declared "two or more races". Of all races, 808 persons in Sioux County declared they were of Hispanic or Latino decent constituting 2.6% of the total population. These numbers of minorities are important when determining the services that are to be provided. As these segments of the population continue to grow, the county's policies and goals with respect to personnel and service provisions may need to be evaluated and adjusted.

FUTURE POPULATION PROJECTIONS

Accurate estimates of population for a county are important factors in determining future needs for services, housing, and infrastructure. Analysis of population projections can provide some insight into the type and quantity of future development and allows local officials to set land use policies to guide expected development. A few reputable agencies, including the Iowa State Demographer's office and the private consulting firm of *Woods & Poole Economics, Inc.* have developed population and demographic projections at the county level.

One method used to determine future population is to explore and analyze the data presented in *Woods and Poole Economics, Inc.* population projections. *Woods and Poole Economics, Inc.* is an independent corporation located in Washington D.C. that specializes in long term county economic and demographic projections. Woods and Poole, Inc. maintain a database for every county in the U.S. which contains projections through 2030 for more than 550 variables. Using *Woods & Poole Economics, Inc.* data is perceived to be more accurate than other sources or methods of calculating population projections. *Woods & Poole Economics, Inc.* data accounts for in-migration and out-migration, as well as economic factors; whereas other projection models such as the cohort-survival method bases its numbers strictly on births and deaths within a given population.

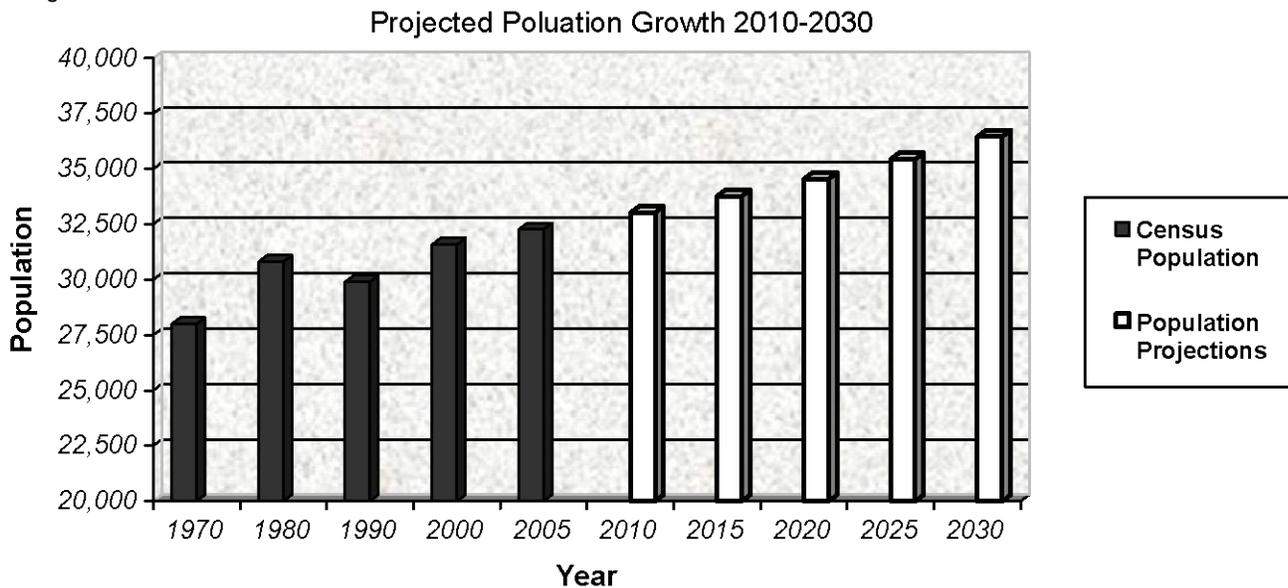
Of particular interest is the declining size of households in Sioux County. Between 1970 and 2000 the average persons per households has decreased from 3.29 to 2.71. Future projections indicate a continuing trend in declining household size, down to a projected low of 2.52 in 2030. The decline in household size is typically attributed to an aging population, the decline in family size, and an increase in the divorce rate which can create additional households with no increase in population. With a projected declining household size, but a projected increasing population, this will have a tremendous impact on the number of future housing units required in future years to accommodate the county's housing needs. As experienced in recent trends throughout Sioux County, Woods and Poole data predicts the county's population will continue to increase, with a population nearing 35,000 by the year 2030.

Table 15 - Projected Population & Persons per Household, 2005-2030

YEAR	SIOUX COUNTY POPULATION	PERSONS PER HOUSEHOLD FOR SIOUX COUNTY
*1970	27,996	3.29
*1980	30,813	2.93
*1990	29,903	2.80
*2000	31,589	2.71
2005 est.	32,277	2.64
2010	33,020	2.59
2015	33,770	2.55
2020	34,550	2.53
2025	35,440	2.52
2030	36,460	2.52

* Source: U.S. Census Data 1970, 1980, 1990, 2000;
2010 to 2030 are projections by Woods & Poole Inc. 2005

Figure 25 -



Another factor impacting Sioux County's future population trends, but not yet discussed is the impact that proposed future annexations will have upon the county. With rural residential and commercial/industrial properties located within close proximity to several cities in Sioux County, any future annexation will most likely result in the loss of additional county residents, housing units and taxable properties. Although the overall county population will not going to change in this scenario, the continued annexation of rural properties will have significant impacts on rural revenues received through taxation and the perhaps even the provision of rural county services in some circumstances. The loss of one significant rural housing subdivision or major industry can result in the loss of millions of dollars in assessed property which in turns generates tax revenue to assist in the provision of county services such as road repair, county sheriff's services, and human services.

When considering population projections, potential socioeconomic variables are not factored in. The projections are based strictly on past population trends, migration patterns and current tax data. The above listed population projections do not take economic and sociological forces into consideration. These variables alone are quite difficult to project or forecast and then to apply them to population projections is even more difficult. A number of assumptions would have to be made and the margin of error at each level of application increases. Factors that may affect population estimates include business expansions, the availability of new housing units, new subdivision development, or a rise or decrease in the cost of living. In some cases a lack of services will drive prospective homeowners to other areas where services are more readily available.

HOUSING VALUATIONS

Sioux County's housing stock is comprised of a variety of housing styles and values. Current census figures show 6,604 specified owner-occupied housing units countywide. In order to understand the current housing stock; it is useful to identify changes in the housing market, values and vacancy. Sioux County is currently experiencing a tight housing market. According to 2000 census data, the largest category of housing values was in the \$50,000 to \$99,999 range. Sioux County has a lower than average percentage of houses valued below \$50,000 and higher than average above \$1 million.

Table 16 -

Valuations of 6,604 Specified Owner-Occupied Housing Units – Sioux County, 2000									
Value in 2000	<\$50,000	\$50,000-\$99,999	\$100,000-\$149,999	\$150,000-\$199,999	\$200,000-\$299,999	\$300,000-\$499,999	\$500,000-\$999,999	\$1 million or more	Median value (\$)
# Units	1,103	3,208	1,647	361	235	25	12	13	\$84,700
% Units	16.7%	48.6%	24.9%	5.5%	3.6%	0.4%	0.2%	0.2%	

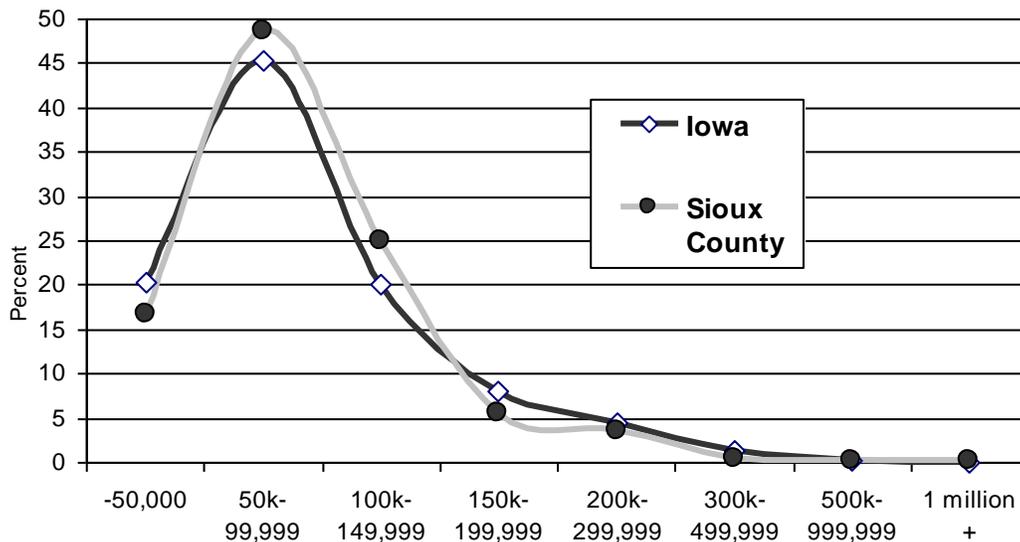
Source: 2000 U.S. Census Data

Table 17 -

Valuations of 665,442 Specified Owner-Occupied Housing Units – Iowa, 2000									
Value in 2000	<\$50,000	\$50,000-\$99,999	\$100,000-\$149,999	\$150,000-\$199,999	\$200,000-\$299,999	\$300,000-\$499,999	\$500,000-\$999,999	\$1 million or more	Median value (\$)
# Units	135,833	301,591	134,212	53,228	29,483	8,938	1,743	414	\$82,500
% Units	20.4%	45.3%	20.2%	8.0%	4.4%	1.3%	0.3%	0.1%	

Source: 2000 U.S. Census Data

Figure 26 - Housing Valuations of Owner-Occupied Housing Units, 2000



It is expected that the largest number of new housing units constructed will continue to be in the higher price ranges. This trend is especially pronounced within the incorporated cities of Sioux County. Usually, lower valued housing units can be found within the smaller communities or rural unincorporated areas of Sioux County. Higher priced housing may not be as easily accessible for people who are first-time homebuyers or one-income families. Programs for first-time homebuyer assistance, down-payment assistance, or moderately priced new housing subdivisions might benefit prospective new homebuyers in Sioux County. Housing financial assistance program address those state and federal programs available to improve the condition, quality, and ownership of single family housing in Sioux County. Assisting housing needs may be attained through the use of a wide range of state and federal housing program.

- Tab Abatement (local government)
- Tax Increment Financing (local government)
- Homeless Assistance Grants Program (IDED)
- Iowa Housing Fund (IDED, HUD)
- Local Housing Assistance Program (IDED)
- Affordable Housing Tax Credits (IFA)
- Housing Assistance Fund (IFA)
- Affordable Housing Program (FHLB)
- Community Investment Loan Program (FHLB)
- 3/2 Option (Fannie Mae)
- Fannie 97 (Fannie Mae)
- Start-up Mortgage (Fannie Mae)
- Community Seconds (Fannie Mae)
- Lease-Purchase Loans (Fannie Mae)
- HomeStyle Mortgage (Fannie Mae)
- Homeownership Loans (USDA)
- First Time Homebuyer Program (USDA)
- Rural Rental Housing Loans (USDA)
- Housing Preservation Grant Program (USDA)

Funding agencies (KEY)

- Local Government - Sioux County or cities in the county
- IDED - Iowa Department of Economic Development
- IFA - Iowa Finance Authority
- USDA (RD) - United States Department of Agriculture, Rural Development
- HUD - United States Department of Housing and Urban Development
- FHLB - Federal Home Loan Bank (Des Moines, IA or Sioux Falls, SD locations)
- Fannie Mae - Fannie Mae Iowa (Des Moines location)

HOUSING OCCUPANCY CONDITIONS

The table below indicates occupancy and vacancy rates according to 2000 Census data. As the number of total housing units has increased so has the vacancy rate also increased for single-family households. The vacancy rate for single family housing is five percent. This percentage varies greatly when looking at the difference between the vacancies of owner occupied housing units and rental units. The owner vacancy rate is only 1.4 percent, which indicates a very tight housing market and shows signs of a housing demand within the county. On the other hand, the rental vacancy rate in Sioux County is 6.5 percent, which is slightly higher than what should be expected for vacant units. A vacancy rate of near 5 percent is considered healthy for both buyers and sellers. The table below clearly indicated the seasonal nature of housing and population in Sioux County. The number of seasonal or recreation vacant housing units appears to have little affect on the overall housing need in Sioux County.

Table 18 -

Vacancy Status – 2000									
	TOTAL HOUSING UNITS	OCC. HOUSING UNITS	TOTAL VACANT UNITS	VACANT HOUSING UNITS		VACANT SEASONAL/ RECREATION USE		Owner Vacancy Rate	Renter Vacancy Rate
				#	%	#	%		
Sioux County	11,260 100%	10,693 95.0%	567 5.0%	534	4.7	33	0.3	1.4%	6.4%

Source: U.S. Bureau of Census, 2000

HOUSING UNIT PROJECTIONS

The average household size in Sioux County during 1990 was 2.80 persons per household. This figure had slightly decreased to 2.71 pph by 2000. The fact that household size is decreasing in Sioux County is a trend taking place throughout the region, state, and nation. Using average household size and population projections one can predict future housing needs. Between 1990 and 2000, Sioux County's total housing units increased from 9,925 to 11,260 (+13.5%). This gain in housing units can most likely be attributed to the county's growing population, an increase in commerce and industry and an increase in recreational opportunities. Additionally, other factors such as higher divorce rates, the average age of married persons increasing and longer life expectancies also contributes to an increasing trend of fewer persons per households. Furthermore, the economic boom of the late 1990s decade afforded many people the opportunity to build new houses with declining interest rates and a generous lending market.

Table 19 - Projected Housing Units needed in 2010, 2020 and 2030

Year	2010	2020	2030
Projected Population	33,020	34,550	36,460
Projected Household Size	2.59 pph	2.53 pph	2.52 pph
Units Needed For Population Increase	12,749	13,656	14,468
Average Demolition of 1 House per year	5	15	25
Total Housing Units Needed	12,754	13,671	14,493
Current Housing units in 2000	11,260	11,260	11,260
Increase From 2000	1,494	2,411 (+917)	3,233 (+822)

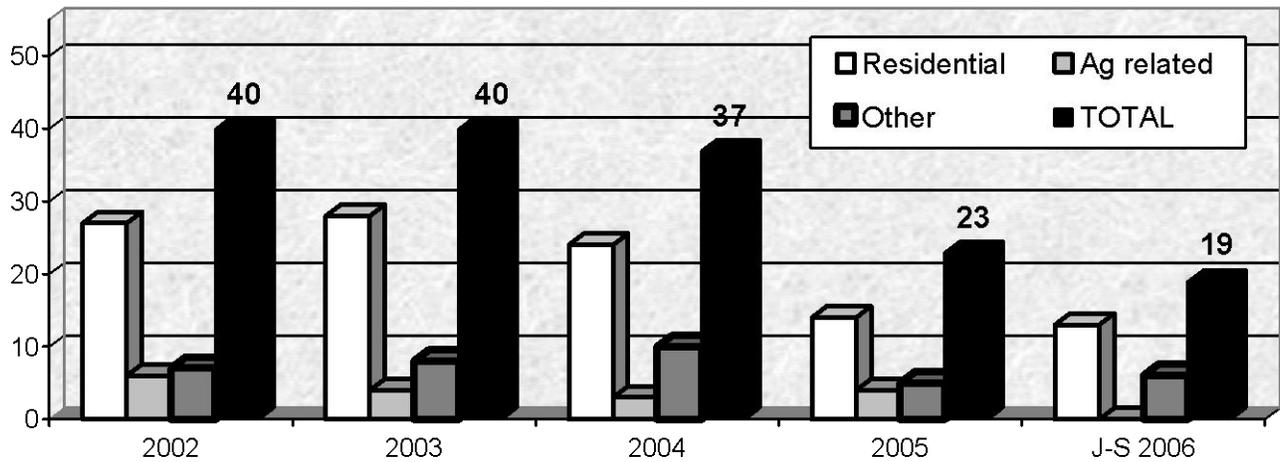
BUILDING PERMITS

According to records kept by the Sioux County Zoning Administrator's office, there were 159 building permits issued for the construction of new housing units, agricultural structures and industrial/commercial uses over a five year period between 2002 and 2006. During this five year time period, there were more than 100 permits issued for new residential or accessory structures. Additionally, another 17 permits were issued for agricultural related products and 36 permits were issued for industrial, commercial, public or other uses. Total value of the building permits over this period of time was near \$20 million.

Table 20 - 2002 to 2006 Building Permits

Year	Residential	Ag related	Other (Ind./Com./Public)	Total	Value
2002	27	6	7	40	\$3,185,500
2003	28	4	8	40	\$3,238,560
2004	24	3	10	37	\$6,636,730
2005	14	4	5	23	\$1,696,270
2006 (Jan-Sep.)	13	0	6	19	\$4,828,500
	106	17	36	159	\$19,585,560

Figure 27 - Building permits in Sioux County, 2002-2006



Source: Sioux County Zoning Administrator's Office, 2006

Although the number of residential building permits has slightly dropped in recent years, the number of agricultural related and industrial or commercial building permits has seemed to remain relatively stable during this same period. The overall number of building permits in Sioux County seems to be influenced the greatest by the fluctuating number of residential permits issued in any given year. On average the number of residential building permits can comprise between 50-70% of the total number of building permits. The other trend that has become apparent from the review of building permits is that the total valuation in any given year does not appear to be relative to the number of permits issued. This is the case because one permit for an agricultural or industrial project valued at \$2,000,000 carries the same weight as 10-15 single family residential building permits.

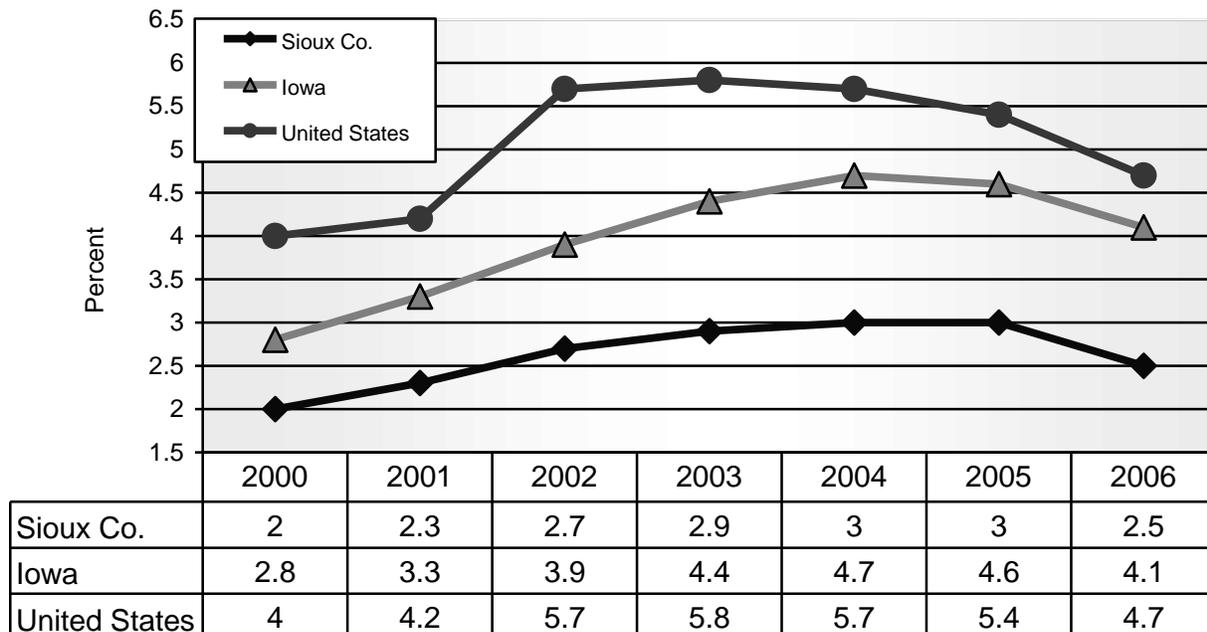
Chapter 12. ECONOMIC DEVELOPMENT

An analysis of past and present economic trends is necessary to determine patterns, trends, and amount of potential economic growth expected in the future. Economic development has become synonymous with community development in Iowa. Many consider economic development one of the most critical aspects of community development. The economic base of any county is comprised of two components, employment and income. In this section, Sioux County’s employment, income and local manufacturing and industry trends are examined and compared to those of Iowa. Economic analysis provides important indicators as to the relative health of the county and potential growth in each of the land use categories.

EMPLOYMENT TRENDS

Looking at the trends in unemployment for Sioux County, Iowa and the United States since 2000 show similar tracks, and tend to indicate trends of low unemployment periods, as well as peaks or spikes in unemployment rates. Overall, the number of unemployed persons in Sioux County from 2000 to 2006 has been quite low, especially considering other regional and national trends. One can easily see how unemployment was coming off the all-time low unemployment rates of 1.5-2.0% achieved in 1999-2000. However, as seen below, all three governmental jurisdictions’ unemployment rates began climbing in 2001 and reached a high during 2003-2004. Historical trends of unemployment for Sioux County and the State of Iowa show an overall cyclical trend of peaks and valleys in unemployment about every ten (10) years. Unemployment rates reached high levels from 1992-1994, then declined through the year 2000. Once again, by 2004, unemployment in Sioux County climbed to the same levels as 1992. It appears as if the unemployment cycle reached its high in 2004 and is beginning its downward trend again in 2005-2006.

Figure 28 - Unemployment rates for Sioux County and Iowa, 2000-2006.



Source: Iowa Workforce Development, Labor Market Information, 2007

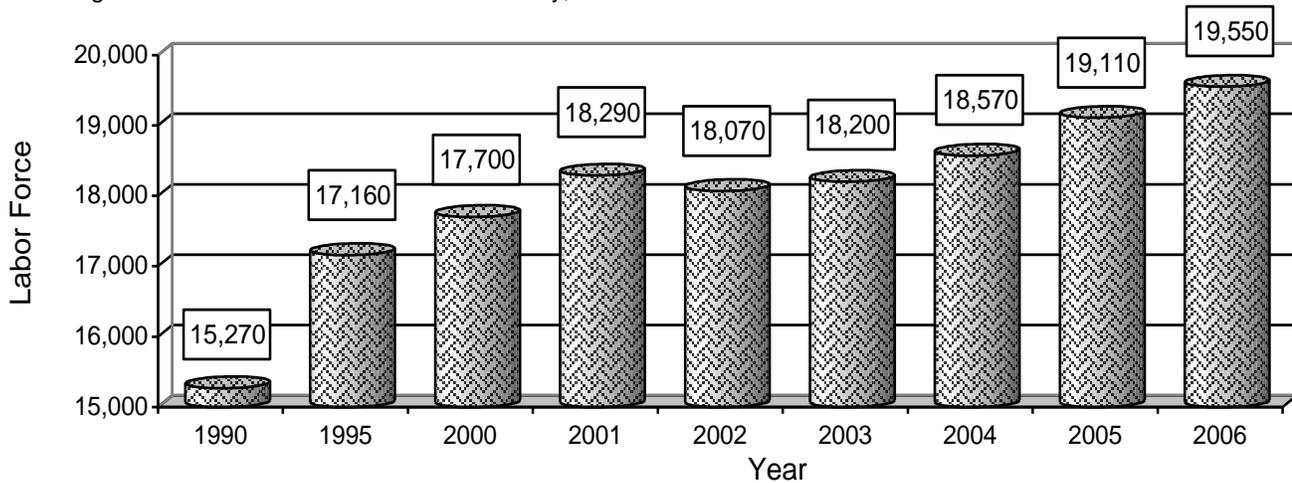
Sioux County, similar to many other counties across northwest Iowa, experience fluctuating and seasonal unemployment highs and lows. The primary factor driving seasonal unemployment in Sioux County is attributed to the construction and agricultural trades. Both of these industries rely upon the weather to a certain degree for their ability to complete work, and during the winter months, the number of employees in these trades is greatly reduced due to seasonal lows in employment opportunities. Looking at the monthly unemployment rates for Sioux County in 2006 shows these fluctuations in unemployment. In January, unemployment was at 3.7 percent, with the annual high reached in February at 3.7%. Unemployment then declined through the spring to a low of 2.0% by May. Unemployment levels remained low and stable from July through the remainder of the year.

Sioux County 2006 Monthly Unemployment Trends

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
3.4%	3.7%	3.2%	2.4%	2.0%	2.5%	2.2%	2.1%	2.0%	2.1%	2.0%	2.1%

According to Iowa Workforce Development, Sioux County’s total labor force stands at 19,550 persons, compared to 15,270 in 1990 and 17,700 persons by 2000. Obviously the overall workforce is continuing to increase in Sioux County which is a good indicator of new and increasing jobs being created in the county providing opportunities for employment and residency in Sioux County. These labor force figures are based on the yearly average. The overall growing labor force seems to bode well for Sioux County, as population projections indicate the county’s population is also growing.

Figure 29 - Labor force trends in Sioux County, 1990-2006



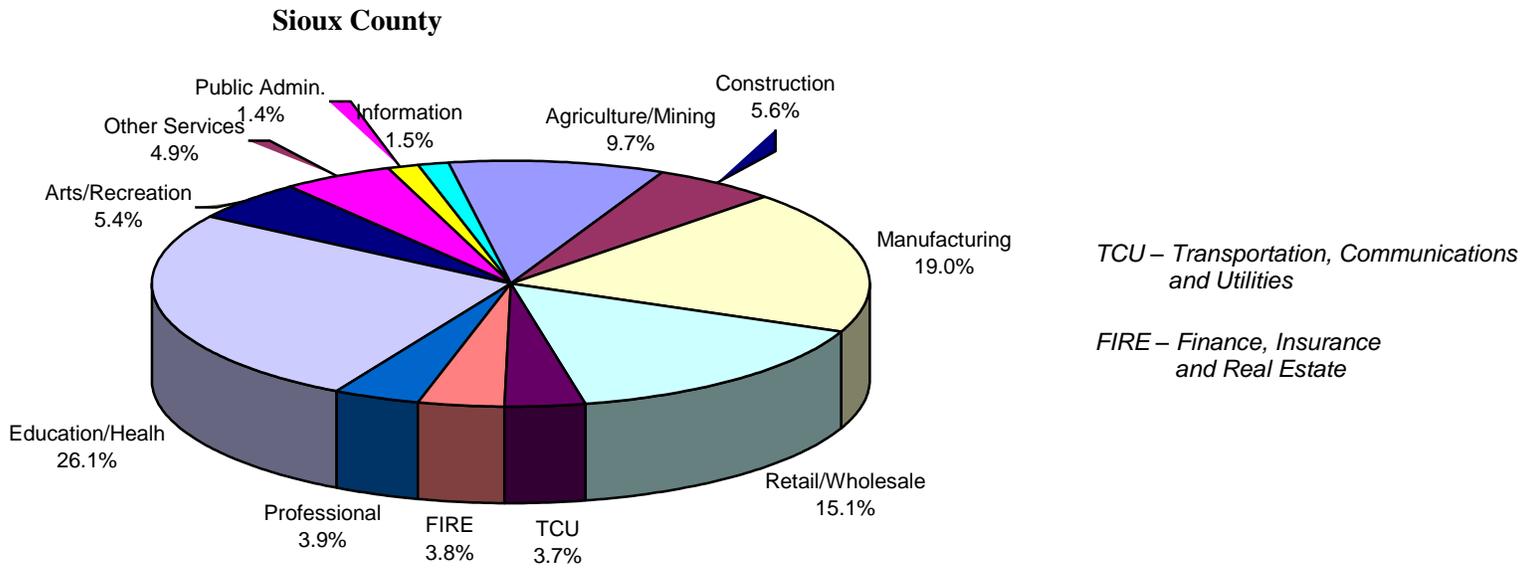
Source: Iowa Workforce Development, Labor Market Information, 2007

INDUSTRY TRENDS

Comparisons of employment and industry sectors between Sioux County and the State of Iowa can provide county leaders with information relative to the economic strengths of Sioux County. Furthermore, in comparison to the State of Iowa, the following data will indicate those industries in Sioux County which flourish, such as the education/health and manufacturing sectors; as well as those industries which are not prominent in Sioux County, such as information technology, communication & utilities and the arts and recreation.

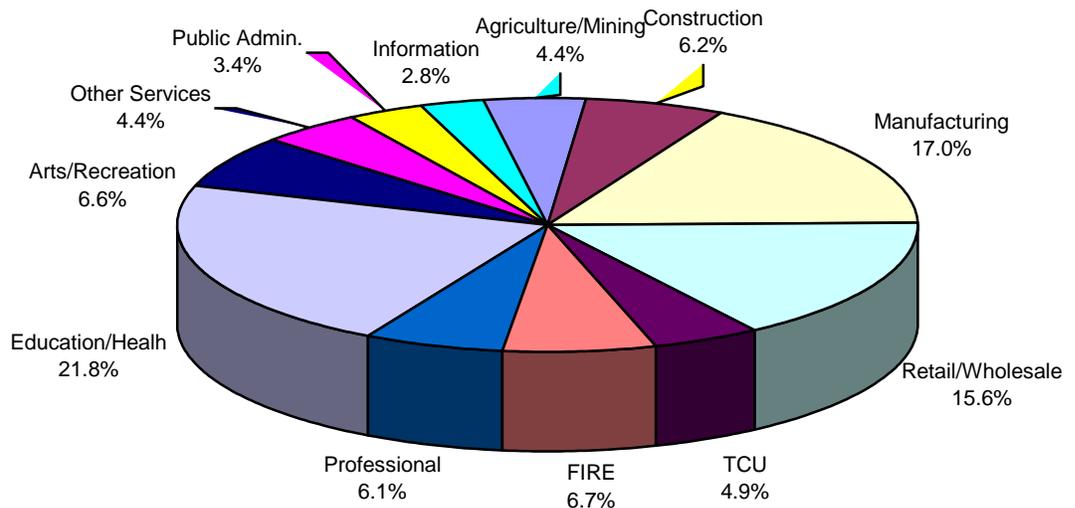
Below are two charts which represent employment trends by industrial employment sectors for both Sioux County and the State of Iowa.

Figure 30- Employment by Industrial Sector, Sioux County, 2000



State of Iowa

Source: U.S. Census Bureau
2000 Census



It is clear the industry employing the most people in Sioux County is the education and health sector, capturing more than 26% of the workforce. This may be contrary to the belief of many who think that agricultural or manufacturing supported businesses are the number one industry in Sioux County. However, with two private colleges located in Sioux Center and Orange City respectively, along with three hospitals located within the Sioux County, it becomes clearer to understand the importance and number of jobs provided by this industrial sector in Sioux County. The manufacturing sector is the second largest source of employment at 19%, followed closely by those employed in the retail/wholesale sector, which comprises 15.1% of employment in Sioux County, slightly lower than the 15.6% statewide average. Those persons working in the agricultural or mining

fields account for nearly 10% of the workforce, or more than double the statewide average. Those employment sectors which fall short of the State of Iowa averages are those persons employed in the transportation, communications, insurance, real estate, financial and professional trades.

The table shown below displays Iowa Workforce Development data comparing employment changes between 1990 and 2000 in Sioux County. This data indicates, to some degree, how industry trends have varied within the county over the past 10 to 15 years. The most drastic change from 1990 to 2000 in any of the industrial sectors occurs in the arts, entertainment, and recreation industry that experienced an 867% increase in employment. However, these figures are skewed due to new definitions and classifications used during the 2000 census versus 1990 census industry classifications. Aside from this anomaly, the largest numeric growth change occurred in the education/health/social services employment sector, which experienced a net increase of 1,571 new jobs. The next largest numeric and percentage increase employment in Sioux County was experienced in the manufacturing sector, with a new increase of 764 new jobs constituting a 31.4% increase. The industry sector that experienced the largest decline in numbers of employed is in wholesale trade, where a loss of 408 jobs or a decrease of 39.4% occurred. The largest numeric loss, relative to employment industries in Sioux County, was in the Agricultural sector with a loss of 738, a net change of -31.2%

Table 21 - Employment trends by Industrial Sector, Sioux County, 1990-2000

	1990	2000	# change	% change
Agriculture and Mining	2,368	1,630	-738	-31.2%
Construction	733	939	206	28.1%
Manufacturing	2,434	3,198	764	31.4%
TCU*	544	703	159	29.2%
Retail Trade	2,299	1,829	-470	-20.4%
Wholesale Trade	1,036	628	-408	-39.4%
Information	NA	246	246	NA
FIRE**	547	637	90	16.5%
Professional/Management	862	656	-206	-23.9%
Education/Health/Social Services	2,826	4,397	1,571	55.6%
Arts/Entertainment/Recreation	94	909	815	867.0%
Other Services	694	822	128	18.4%
Public Administration	231	233	2	0.9%
TOTAL	14,668	16,827	2,159	14.7%

*Transportation, Communications, Utilities **Finance, Insurance, and Real Estate
 Source: U.S. Census Bureau, 2000 Census

These trends indicate that an increasing number of employment opportunities exist in Sioux County and the overall labor force is experiencing growth in a majority of the industrial sectors.

2007 Sioux County Major Industries include, but not limited to:

<u>Name of Industry/Business</u>	<u>Type of Industry/Business</u>
Rural Sioux County	
○ Bison Energy, LLC (near Hull)	renewable energy facility
○ Siouxland Energy, SELC (near Sioux Center)	fuel manufacturer
○ Amsoil (south of Sioux Center)	synthetic motor oil
○ Iowa Plastics, Inc (near Hull)	recycling
○ Sioux Lyon Implement (north of Ireton)	agricultural implement sales and service
○ Franken Implement (near Rock Valley)	agricultural implement sales and service
○ Siouxpreme Packing (south of Sioux Center)	pork slaughter and fabrication
○ Hematech/Trans Ova Genetics (Sioux Center)	cattle embryo transfer
○ Koima Company (east of Rock Valley)	laser cutting and metal fabrication
○ Siouxland Machine (near Rock Valley)	metal machining
○ Te Slaa Trucking (near Perkins)	product sales, shipping and trucking
○ Van's Implement (near Hull)	agricultural implement sales and service
○ Van Der Zwaag Enterprises (near Hull)	trucking and shipping of freight
○ Vis & Sons (near Hull)	auto and truck sales and service
○ Automated Waste Systems (near Hull)	manure handling equipment
○ Keizer Aluminum Wheels, Inc. (Orange City)	race care and high performance wheels
○ Natural Beauty of Iowa (near Boyden)	nursery and greenhouse
○ Highway 18 Truck Wash (near Hull)	truck and heavy equipment washing facility
○ National Builders (near Hawarden)	new grain bins & steel buildings, repair grain bins
○ Tri State Ag Corp (near Hull)	fertilizer/crop production sales
○ E&W Poultry	poultry production and processing
○ We Three Egg (near Sioux Center)	layer hen egg production facility
○ Center Fresh Egg (near Sioux Center)	layer hen egg production facility
Sioux Center	
○ Boehringer Ingelheim Vetmedica, Inc.	veterinary pharmaceutical manufacturing
○ Farmers Co-op Society	farmers coop
○ Sioux Automation Center, Inc.	agricultural and industrial manufacturer
○ Link Manufacturing Ltd.	manufacturing
○ Nemschoff Chairs Inc.	furniture manufacturer
○ Pella Corporation	window & door manufacturer
○ Plumbing & Heating Wholesale, Inc.	wholesale plumbing & supplies
○ Vet Pharm	wholesale distributor of veterinary supplies
○ Visser Elevator	agricultural feed and grain
○ Walinga USA, Inc.	conveying/transportation equip. for ag industry
○ Tri-State Livestock Auction	livestock auction and sales
○ Jesco	electrical materials wholesaler
○ Golden Crisp	processed chicken
○ Coop Gas & Oil	propane/ tires and gasoline services
○ Alliance Concrete	redi-mix and pre-stressed concrete products
Orange City	
○ Advance Brands LLC	manufacture/distributes convenience meats
○ American Identity	development/promotion of logo merchandised items
○ Diamond Vogel Paints	paint manufacturer
○ EZ-Liner Industries	manufacturer of traffic paint and striping equip.
○ CIVCO	manufacturer & supplier of medical equipment

- Revival Animal Health
- Silent Drive, Inc.
- Van Beek Scientific
- Quatro Components
- Pizza Ranch Corporation
- Dutch Masters
- Alliance Concrete

wholesaler & supplier of animal pharmaceuticals
 manufacturer of agricultural and truck axles
 develop and produce animal nutrition products
 carbon fiber parts
 headquarters for pizza restaurant chain
 paint manufacturer
 redi-mix and pre-stressed concrete products

Rock Valley

- Valley Machining
- A&I Products
- Rock Industries
- Farmers Cooperative
- Sioux Dairy Equipment
- Chia-Chi Enterprises, Inc.
- Rock Valley Tractor Parts
- VH Mfg, Inc./Polytin
- Siouxland Fabricating
- Double HH Manufacturing
- Midwest Pro Mfg, Inc.
- Van Zee Concrete Products Inc.
- TCS (Total Component Solutions)
- VIP (Valley Industrial Powder Coating)

machining and hydraulics
 agricultural and heavy equipment parts
 heat treating and metal manufacturing
 agricultural feed, fertilizer and gas products
 dairy equipment sales and service
 oriental meat products
 farm and agricultural parts
 agricultural replacement parts
 metal fabricating
 machining and hitchpins
 manufactured concrete block and retaining walls
 redi-mix and pre-stressed concrete products
 manufacturing of metal components
 industrial powder coating

Hawarden

- American Identity
- Coilcraft, Inc.
- HSG Iowa
- Iowa Lamb Corporation
- LG Everist
- Timber Roots Truss

development/promotion of logo merchandised items
 manufacturer of microcoils for communications
 international lambskin manufacturer
 producer of processed case-ready lamb meat
 production of crushed stone and gravel products
 custom truss manufacturing

Hull

- Formosa Food Co.
- Foreign Candy Company
- Vander Kooi Freight
- RVS, Inc.
- Roda Manufacturing
- K & O Manufacturing
- Oldenkamp Manufacturing
- Hull Feed & Produce
- Hull Tractor Repair
- VR Repair
- New Tec

process secondary pork products
 distribution of promotional foods and candies
 shipping and trucking industry
 service on trucks and heavy equipment
 manufacturing of agricultural equipment
 ag related work trailers
 manufacturing of enclosed trailers
 agricultural feed and supplies
 agricultural vehicle and equipment repair
 steel and welding
 refurbishing fork lifts and boom lifts

Alton

- Hawke & Co. Ag Systems, Inc.
- Midwest Farmers Cooperative Terminal
- Northwest Iowa Agronomy, LLC
- Te Brink Trucking
- Alton Well & Concrete
- Babcock Meat Processing
- Siouxland Masonry, Inc.

agricultural equipment sales and service
 regional railroad grain terminal
 regional fertilizer manufacturing/distribution
 product shipping and trucking
 well digging & concrete services
 processing prepared meat products
 concrete masonry

Hospers

- Custom Parts Engineering agricultural custom aluminum parts
- Den Hartog Industries poly tanks and swine equipment
- Premium Iowa Pork swine slaughter and processing
- Fred's Plumbing & Heating plumbing, heating and HVAC
- OK One-Stop tire dealer and gasoline sales
- B&B Poultry processed chickens
- Midwest Farmers Coop grain storage, agricultural chemicals, fertilizers
- Farmers Coop Company agricultural feed and supplies

Boyden

- Demco (Dethmer's Manufacturing Co.) agricultural trailer and metal goods manufacturer
- SIG International Iowa premium pork processor
- Sparboe Food Corporation egg breaking operation
- Farmers Coop Society manufactured feed, agronomy services & grains
- Quality Farm Supply manufactured feed & buy/sell grains
- Boyden Ag Services supplier of agricultural limestone
- Farmers Feed and Supply livestock premixes, feed ingredient distributor
- Northwest Ag Service buy/sell grain and agronomy services

Ireton

- Craft Marketing Connection marketing and consulting of craft products
- Siouxland Propane propane sales and distribution
- Farmers Cooperative agricultural feed and fertilizer, grain storage
- Ireton Feed Store swine feed supplies
- Services Unlimited commercial electrical services

Maurice

- Maurice Concrete Supply concrete redi-mix and concrete products
- Farmers Cooperative grain sales, fertilizer sales, grain storage

Matlock

- Farmers Cooperative Elevator agricultural feed and fertilizer, grain storage

Sheldon (portion located in Sioux County)

- Feed Mill agricultural feed and supplies

Source: *Sioux County Zoning Administrator's Office*, www.siouxcenterchamber.com/business;
www.orangecityiowa.com/economicbodies; www.cityofrockvalley.com; www.hawardenddevelopment.com;
www.cityofhull.org/businesses; www.altoniowa.org/businesses; www.boydeniowa.net/business

LOCATION QUOTIENT

Areas of local industrial specialization within Sioux County may be discovered by comparing the composition of employment in Sioux County to a larger reference region. A relatively high (or low) percentage of employment in a sector compared to the reference region may reflect a competitive advantage (or disadvantage) in that sector. Analysts frequently use a measure called a location quotient for this type of comparison. A location quotient is simply a ratio comparing the local percentage of employment in a sector to the national average percentage of employment in that sector. A location quotient greater than one (1) suggests a regional concentration of employment, in that sector. A location quotient of less than one (1) suggests a regional disadvantage in that sector.

In the table below, the percentage of employment by sector for Sioux County and Iowa are contained in columns 1 and 2. These values are used to derive county and state location quotients for each sector. The location quotients are displayed in columns 3 and 4. It may be informative to compare the county's location quotients to statewide values by sector. For example, if the county's location quotient is greater than one (1) and it exceeds the statewide average, the county may have a regional, as well as a national, competitive advantage in that sector.

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Support provided by: Iowa State University, the Agriculture Experiment Station, ISU Extension Community and Economic Development, College of Agriculture, Department of Economics, and Department of Sociology.

Table 22 - Nonfarm Employment by Sector: Percentage Values and Location Quotients, 2002

	Percent of Nonfarm jobs		Location Quotient	
	Sioux County	Iowa	Sioux County	Iowa
Forestry, fishing, related activities and other...	(D)	0.6	(D)	1.0
Mining	(D)	0.2	(D)	0.3
Utilities	0.2	0.5	0.6	1.3
Construction	6.2	5.7	1.0	1.0
Manufacturing	23.7	13.0	2.5	1.3
Wholesale trade	7.3	4.0	1.9	1.1
Retail trade	10.6	12.8	0.9	1.1
Transportation and warehousing	1.6	3.3	0.5	1.0
Information	0.8	2.2	0.3	0.9
Finance and insurance	3.8	5.8	0.8	1.2
Real estate and rental and leasing	1.7	2.8	0.4	0.7
Professional and technical services	2.9	3.6	0.5	0.6
Management of companies and enterprises	0.1	0.5	0.1	0.4
Administrative and waste services	1.9	4.5	0.3	0.8
Educational services	7.1	2.1	3.7	1.1
Health care and social assistance	9.8	10.8	1.0	1.1
Arts, entertainment, and recreation	0.7	1.9	0.3	0.9
Accommodation and food services	4.8	6.3	0.7	0.9
Other services, except public administration	5.5	5.6	1.0	1.0
Government and government enterprises	10.2	14.1	0.7	1.0

(D) = Not disclosed

INDUSTRY/EMPLOYMENT PROJECTIONS

The Iowa Workforce Development compiles current levels of industry employment for workforce regions across the state and projects the level of anticipated employment in 10 years for each of these industries. This employment projection for 2014 is only available on a regional basis. The data for Region 3&4 includes the counties of Sioux, Lyon, Osceola, O'Brien, Dickinson, Clay, Buena Vista, Palo Alto, Emmet and Kossuth. The western portion of this region (Region 4) which is comprised of Sioux, Lyon, Osceola and O'Brien counties constitutes the primary labor shed for Sioux County. Therefore, the employment projections presented below should provide useful data in regards to the employment trends and projected percentages of anticipated growth in Sioux County's labor shed.

Table 23 - Iowa Workforce Development Region 3&4 Employment Projections, 2004-2014

Industry Description	2004 Est. Employment	2014 Projected Employment	Total Growth	Percent Change
Self employed/Family worker	6,535	6,860	325	5.0%
Utilities	220	215	-5	-2.3%
Construction	900	925	25	2.8%
Wood product manufacturing	815	1,095	280	34.4%
Chemical manufacturing	560	650	90	16.1%
Fabricated metal manufacturing	1,030	975	-55	-5.3%
Machinery manufacturing	1,780	2,060	280	15.7%
Transportation equipment mfg.	2,205	2,480	275	12.5%
Miscellaneous manufacturing	700	650	-50	-7.1%
Electronics/Appliances	245	280	35	14.3%
Building materials	880	1,055	175	19.9%
Gasoline stations	1,020	1,150	130	12.7%
General merchandise	1,150	1,320	170	14.8%
Miscellaneous retailers	455	535	80	17.6%
Truck transportation	1,130	1,385	255	22.6%
Warehousing and storage	35	45	10	28.6%
Publishing industries	365	420	55	15.1%
Telecommunications	240	245	5	2.1%
Internet service providers	65	80	15	23.1%
Insurance and related activities	670	820	150	22.4%
Real estate	265	325	60	22.6%
Professional, scientific & technical	1,125	1,475	350	31.1%
Management	315	385	70	22.2%
Administrative and support services	1,200	1,540	340	28.3%
Education	6,520	6,945	425	6.5%
Hospitals	2,795	3,290	495	17.7%
Ambulatory health care services	1,285	1,510	225	17.5%
Nursing and residential care	3,090	3,800	710	23.0%
Accommodation/hospitality	620	725	105	16.9%
Food service and drinking places	3,890	4,385	495	12.7%
Repair and maintenance	550	630	80	14.5%
Local government	3,090	3,400	310	10.0%
State government	325	325	0	0.0%
Federal government	170	155	-15	-8.8%

Source: Labor Market and Economic Research Bureau, Iowa Workforce Development

COMMUTING PATTERNS

According to the 2000 census data, the average commute time for Sioux County residents was 13.0 minutes. While more than 73 percent of county residents drove themselves back and forth to work, there are nearly 8 percent who carpool, another 7 percent that work at home, and probably most surprisingly is the 10.4 percent of Sioux County residents that walk to work. The percentage of Sioux County residents that walk to work is more than double that of surrounding counties and compares to only 4% of Iowa's statewide that walk to work. These statistics indicate that although most county residents are still driving to work, the short commute time suggests most residents are working either in or nearby Sioux County.

The changes in commuting patterns over the past 10 years suggest two trends are happening. First, there are more people working in Sioux County, but those that are commuting are driving significantly farther than 10 years previous. As seen below, those persons that drove less than 5 minutes to work increased by 27 percent. However, when comparing the percentage of these workers who drove less than five minutes in 1990 to 2000, the overall percentage of the total

workers did not increase significantly. Significant increases in the percentage of residents that commute long distances were experienced in Sioux County. For instance, those persons that commute between 40 minutes to 1 hour to work increased by nearly 38 percent. Also, those persons that commute between 60 and 90 minutes (one way) to work increased by nearly 53 percent, although the total percentage of these long distance commuters comprise a small percentage of the total employed workforce.

Figure 31 - Percent Change in Commuting Times, 1990-2000

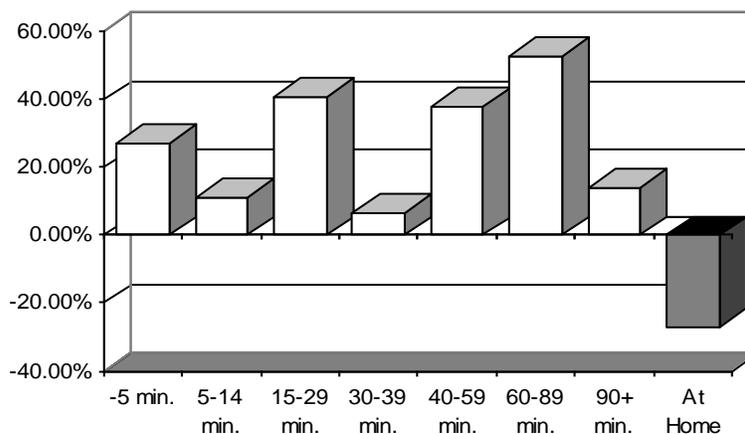


Table 24 – Travel Time to Work for Workers in Sioux County, 2000

Year	1990	2000	# change 1990-2000	% change 1990-2000
Total Workers, 16 & Over	14,418	16,646	2,228	15.5%
Less than 5 minutes	2,715	3,448	733	27.0%
5 to 14 minutes	6,553	7,278	725	11.1%
15 to 29 minutes	2,375	3,344	969	40.8%
30 to 39 minutes	528	562	34	6.4%
40 to 59 minutes	219	302	83	37.9%
60 to 89 minutes	204	312	108	52.9%
90 or more minutes	167	190	23	13.8%
<i>Worked at home</i>	<i>1,657</i>	<i>1,210</i>	<i>-447</i>	<i>-27.0%</i>

Source: Office of Social and Economic Trend Analysis, Iowa State University, 2007

RETAIL TRADE ANALYSIS

A look into the county's retail trade statistics translates into how successful the retail and sales industries are to Sioux County. This data also translates into the purchasing power of the county's residents as well as dollars spent from tourists in Sioux County. The trends for retail trade identified in this section are made available from Iowa State University Extension, with data collected from the Iowa Department of Revenue and Finance. The data may help explain retail employment gains and losses over the last decade. Characteristics of retail activity are often indicative of the overall economic vitality of a county.

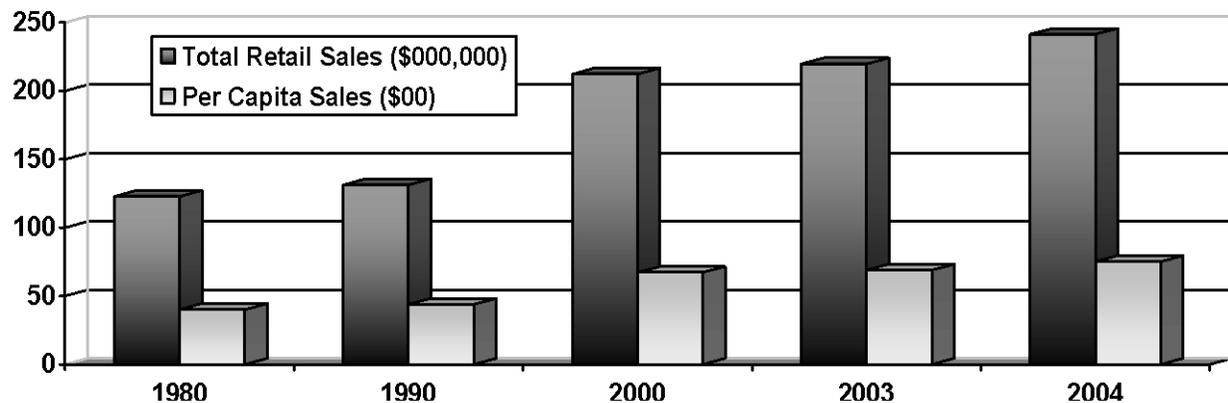
Table 25 - Retail Trade Analysis, 1980-2004

Fiscal Year	Total Retail Sales (<i>actual</i> \$)	Retail Sales <i>adjusted for inflation</i>	Number of Firms	Per Capita Sales	Pull Factor
2004	\$241,260,000	\$241,260,000	1,055	\$7,515	0.76
2003	\$219,600,000	\$219,600,000	1,065	\$6,899	0.71
2000	\$212,190,000	\$228,400,000	1,153	\$6,717	0.71
1990	\$131,340,000	\$187,440,000	1,121	\$4,396	0.68
1980	\$122,810,000	\$288,000,000	1,068	\$4,013	0.89

Source: Office of Social and Economic Trend Analysis, Iowa State University, 2005

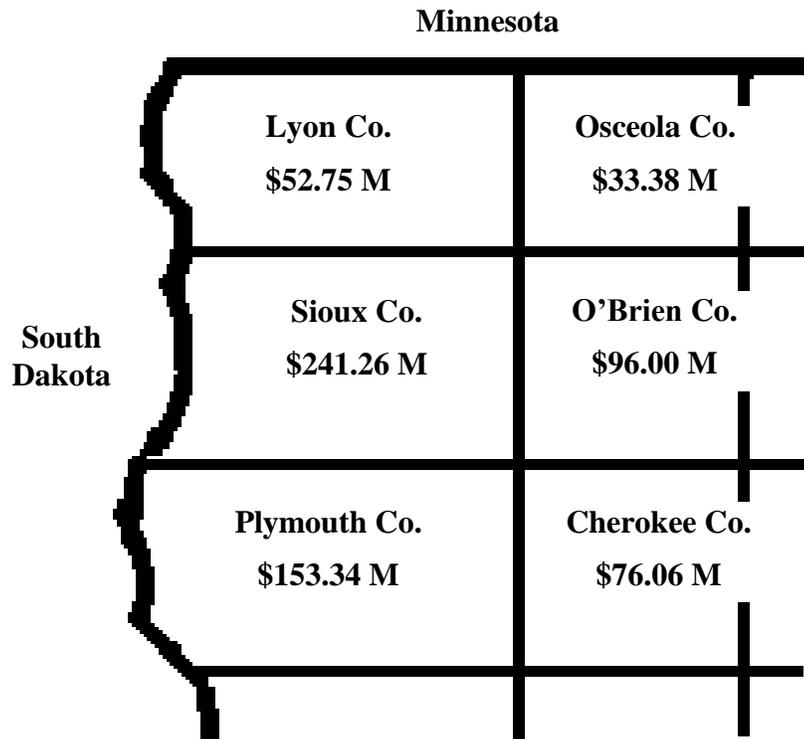
Data Source: Iowa Department of Revenue and Finance

Figure 32 - Retail Sales and Per Capita Sales for Sioux County, 1980-2004



According to a 2005 retail trade analysis provided by Iowa State University, *SETA (Social and Economic Trend Analysis)*, Sioux County experienced retail sales of more than \$241 million during 2004. This figure has increased by nearly 21.7 million or 9.9 percent from 2000. However, this four-year increase in retail sales is fully understood when examining the long term trends of retail sales figures in Sioux County. Retail sales have increased an astonishing 96.5 percent or nearly doubling their sales since 1980. Although the retail sales data in real figures looks impressive in Sioux County, when you consider in the rate of inflation from 1980, the 122.8 million from 1980 has a value today of 288 million, as compared to the current retail sales of 241 million. Furthermore, in 1980 there were 1,068 retail establishments collecting sales tax in Sioux County. By 1990 the number of retail establishments had increased to a total of 1,121. By the year 2000, retail establishments slumped back to a total of 1,055.

Figure 33 - **2004 Total Retail Sales** Comparison in Northwest Iowa

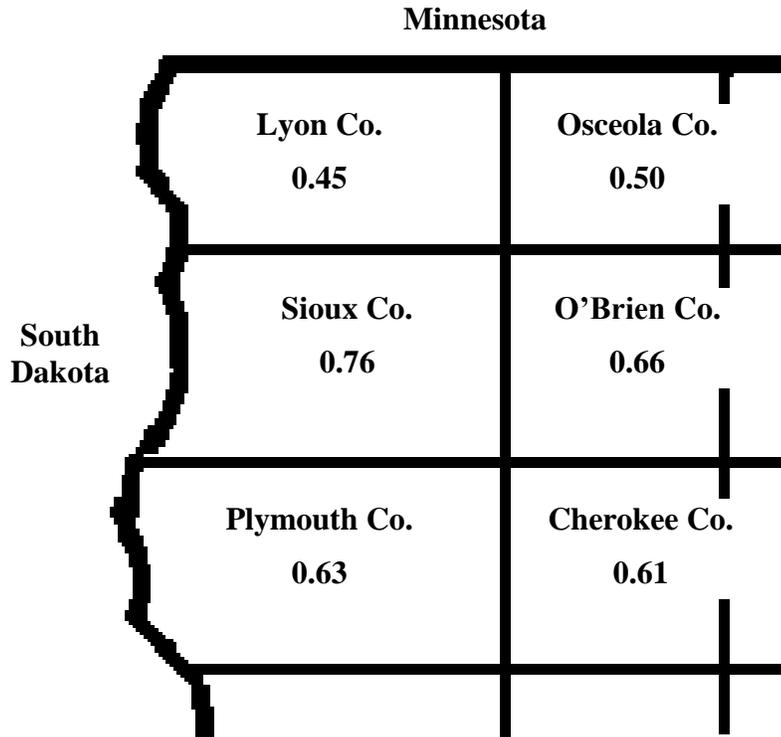


As seen in the map above, Sioux County has significantly more retail sales than the surrounding counties. The county with the next highest retail sales is Plymouth County with \$153 million, which is still 57 percent lower than Sioux County. Other neighboring counties such as Lyon and Osceola are respectively collecting 3½ and 6½ times fewer retail sales, when compared to Sioux County. The amount of retail activity in Sioux County indicates a strong and vibrant economy.

Another good indicator of the strength and vitality of a county’s retail economy is to look at the “pull factor.” The pull factor is a numerical indicator of the amount of retail activity taking place within or out of a jurisdiction. The number “1” indicates that the appropriate amount of retail sales is taking place for the size of jurisdiction and population residing within a given area. Any number below a “1” indicates that fewer people are shopping in the county than is expected indicating a retail “leakage”. Whereas any number above a “1” indicates the county is drawing in more retail sales that the local population should be able to sustain, indicating a retail “surplus”. In 1980, Sioux County’s pull factor was 0.89 indicating that retail sales were slightly below expected figures. However, by 1990, the pull factor decreased to 0.68, indicating a decrease of 24%. By 2004, Sioux County reached a pull factor of 0.76 indicating a slightly lower than expected draw in retail sales. These factors indicate persons from within Sioux County are likely shopping both within and outside of the county, and are not drawing in a substantial amount of out of area shoppers.

When looking into the surplus or leakage of a county’s retail sales, it is often a good idea to take a comparable look into how surrounding counties are performing. However, being located halfway between the two metropolitan cities of Sioux Falls, SD and Sioux City, IA likely plays a significant role in the county’s lack of projected retail sales based on population. The regional pull factor map on the following page indicates that Sioux County is likely drawing in buyers from surrounding counties, but is also losing potential customers to the larger metropolitan areas as well.

Figure 34 - **2004 Pull Factor** Comparison in Northwest Iowa



TRADE AREA CAPTURE

Another method for determining the amount of retail sales activity occurring within Sioux County is to calculate the county’s trade area capture. The purpose of the "Trade Area Capture" formula is to examine how many customers or potential purchasers are drawn to Sioux County to shop for any type of product at any given time. The trade area capture estimates the portion of customers the county actually draws from within and outside its boundaries. The trade area capture analysis is also be used by retail sectors to understand trade growth or decline.

Table 26 -

<p>TRADE AREA CAPTURE FORMULA</p> $A / [B \times (C / D)]$ <p>A = Total Retail Sales for Sioux County B = Per Capita Sales for the State of Iowa C = Sioux County Per Capita Income D = State of Iowa Per Capita Income</p>

When comparing the trade capture area of Sioux County for the years 1990 and 2000, the trend indicates a growing trade capture area. In other words, the county is gaining additional sales from other communities and counties outside of Sioux County.

Sioux County's trade area capture for the year 2000 is as follows:

A (Total Retail Sales)	= \$241,260,000
B (State Per Capita Sales)	= \$9,427
C (Sioux County per Capita Income)	= \$16,532
D (State per Capita Income)	= \$26,554

Trade Area Capture for the Sioux County (2000) = 41,278 customers (2000 pop. 31,589)

This means that businesses in Sioux County captured the sales of 41,278 customers from its population base of 31,589 or 131% of its expected customers. In this projection, the county theoretically captured retail sales in the amount that would support a population base of nearly 10,000 more residents than Sioux County currently has.

Sioux County's trade area capture for the year 1990 is as follows:

A (Total Retail Sales)	= \$131,340,000
B (State Per Capita Sales)	= \$6,480
C (Sioux County per Capita Income)	= \$10,098
D (State per Capita Income)	= \$17,389

Trade Area Capture for the Sioux County (1990) = 34,945 customers (1990 pop. 29,903)

This means that businesses in Sioux County captured the sales of 34,945 customers from its 1990 population base of 29,903 or 117% of its customers. Again, in 1990 the county theoretically captured retail sales in the amount that would support a population base of nearly 5,000 more residents than Sioux County's 1990 population.

INCOME DISTRIBUTION

As employment opportunities increase in Sioux County, the county will realize benefits including a greater tax base potentially leading to an increase in population. Studying the income distribution of a county compared to other counties can indicate overall wealth and subsequent purchasing power, providing some insight into the relative economic health of the county.

One way of analyzing incomes for a county is to examine median income levels. The 2000 median income for households in Sioux County was \$40,536 for households and \$45,846 for families. The mean retirement income earned by those retired person in Sioux County was \$11,281 in 2000. When Sioux County median income figures are compared to the State of Iowa as a whole, the two are fairly close. The median income for all households in Iowa was slightly lower than Sioux County at \$39,469. Conversely, Iowa was somewhat higher than Sioux County when comparing median family income during 2000. Iowa's median family income is \$48,005. Similarly, the State of Iowa maintains a slightly higher median retirement income of \$13,862 as compared to Sioux County. Relative to another variable, income growth in Sioux County over the last ten years is very comparable to the trends experienced at the state level. Sioux County median household income experienced a 58 percent increase from its 1990 base of \$25,692. Comparatively, the State of Iowa experienced a 51 percent growth in median household income during this same time period. Furthermore, Sioux County's median family income increased more than 56 percent from the 1990 base of \$29,356, as compared to a 52 percent increase for the state.

Along with age and population figures, it is important to look at income distribution to examine what the residents of Sioux County are earning in wages and salaries. This information will help determine the amount that residents can afford for current and future housing and living expenses, along with potential purchasing power. The following table shows household income for Sioux County residents according to 2000 Census data. It should be noted that between 1990 and 2000 families in the three lowest income levels decreased in actual numbers, but all other income categories (\$25,000 to \$200,000+) have increased. The fact that higher income levels are increasing is a positive indicator of household and family income earnings in Sioux County.

Table 27 - Sioux County Household and Family Income Distribution, 2000

\$ In Income	# of Households	% of Total Households	# of Families	% of Total Families
Less than \$10,000	713	6.7%	239	3.0%
\$10,000-14,999	773	7.2%	295	3.6%
\$15,000-24,999	1,346	12.6%	715	8.8%
\$25,000-34,999	1,585	14.8%	1,119	13.8%
\$35,000-49,999	2,516	23.6%	2,217	27.4%
\$50,000-74,999	2,415	22.6%	2,257	27.9%
\$75,000-99,999	762	7.1%	720	8.9%
\$100,000-149,999	396	3.7%	365	4.5%
\$150,000-\$199,999	70	0.7%	54	0.7%
\$200,000 or more	106	1.0%	106	1.3%
Total Households	10,682	100.0%	8,087	100.0%

Source: U.S. Census Bureau, 2000

Chapter 13. TRANSPORTATION & INFRASTRUCTURE

Sioux County’s surface transportation network includes a complex and comprehensive roadway system including Highway 60, a four-lane expressway, several federal and state highways, county highways, and multiple secondary roads. The county’s roadway network consists of 1,467.8 miles. Of these road miles, 113 miles are considered primary miles and the remaining 1,355 miles comprises the secondary roads system. There are 49.1 miles of dirt or unpaved secondary roads which accounts for only 4.5% of the secondary roads. During the past two decades, the secondary roads in Sioux County have experienced a significant increase in traffic, as both residents and farmers seek alternate routes in order to achieve quicker travel times and less congestion. Additionally, farm-to-market roads also received a considerable increase in use as axle loads for trucks and trailers continue to increase. Currently in Sioux County, there are a total of 424.8 miles of farm to market roads. Of the farm to market roads less than one mile is not surfaced, meaning that over 99% of the farm to market roads in Sioux County are surfaced.

Below is a table identifying road miles and surfacing types in Sioux County, as well as road improvements made in 2005.

Table 28 – Road Miles and Road Surface Types in Sioux County, 2005

Surface Type	Earth	Gravel	Bituminous	Asphalt	PCC	Combination
Total miles by surface	49.14	1,031.89	0.09	251.57	22.07	0.00
Total new/resurfaced miles in 2005	---	---	---	29.64	---	---

Figure 35 - 2006 Iowa DOT Transportation Map



Sioux County has experienced a population increase and remains one of the fastest growing rural counties in Iowa. As a result, development and increased traffic has put increased pressure on new paving and/or reconstruction and maintenance projects. Sioux County has been active with all of the cities in the county upgrading roads with joint city-county jurisdiction.

The future is bright in Sioux County with robust development and economic growth. The County's Engineering Department will continue to emphasize a balance between rehabilitation of existing paved roads and the accommodation with developing areas. Over the continuation of the next fifteen to twenty years in Sioux County, both the Board of Supervisors and staff will continue to emphasize and participate in the rehabilitation and repair of existing roads rather than new paving. Gravel roads serving uninhabited areas of the county (level B and C service roads) are left unplowed during the winter.

STREETS

Sioux County's street and road network is an indispensable resource for the county. Few other elements so drastically affect development. Traffic systems have evolved from a constantly changing set of determinants. A few of these determinants governing current and future roadway design are:

Psychological Factors:

1. The population masses using a traffic system tend to follow the fastest course.
2. When a properly designed traffic system is not provided, the driving public establishes one by finding alternative routes, regardless of adjacent land uses and other planning considerations.
3. The driving public tends to drive according to environmental conditions of the roadway.

Economic Factors:

1. Streets and roadways comprise a large percentage of land acreage within the county and, consequently, substantial capital assets are tied up in the total land value of the roadways.
2. The current capital expenditures for road improvements, maintenance costs, construction costs, etc., of the roads are a substantial portion of county, state, and federal expenditures.

Physical Factors:

1. Street grades and the grades of abutting properties may restrict driver sight distances.
2. Street and county road intersections can have severely restricted sight clearances as a result of private/public signs, trees, and crops during certain times of the year.
3. Poor intersections, street alignment, right-of-ways, grading and drainage techniques, etc. can contribute safety hazards conditions which can severely reduce traffic flow capacities.

TRAFFIC FLOW

Traffic flow surveys are recorded in each Iowa county every four (4) years. The most recent traffic county survey recorded in Sioux County was in 2003. Prior to 2003, historical traffic data is recorded for 1999 in Sioux County, and a new survey is scheduled to be completed during the summer of 2007. Many portions of the highway system in Sioux County have experienced traffic increases over the past four years, whereas other rural areas of the county have seen declines in traffic flow.

Following is a listing of traffic counts at some of the most heavily utilized highways, roads and intersections in Sioux County, based upon the 2003 IDOT traffic survey.

Highway 10 -

At Hawarden -	2,000 vehicles
At the Ireton corner -	2,060 vehicles
West of Hwy 75 intersection -	2,060 vehicles
Hwy 75 to Orange City -	3,690 vehicles
East of Alton -	1,870 vehicles
At Granville -	1,880 vehicles

Highway 75 -

At Maurice -	2,970 vehicles
South of Hwy 10 -	3,530 vehicles
North of Hwy 10 -	6,100 vehicles
South side of Sioux Center -	6,100 vehicles
North side of Sioux Center -	6,500 vehicles
At Perkins corner -	4,870 vehicles
North of Hwy 18 -	2,110 vehicles

Highway 18 -

West of Rock Valley -	1,880 vehicles
East of Rock Valley -	3,380 vehicles
West of Hull -	3,970 vehicles
Hull to Boyden -	3,770 vehicles
East of Boyden -	3,980 vehicles
West of Sheldon -	4,240 vehicles

Highway 60 -

South of Sheldon -	4,700 vehicles
North of Hospers -	4,700 vehicles
Hospers to Alton -	4,190 vehicles
South of Alton -	3,170 vehicles
At Carnes -	4,080 vehicles

(these numbers do not reflect traffic after construction of the four-lane Hwy 60 expressway)

Vehicle Miles Traveled (VMT) by County

Traffic Data Definitions:

- Rural - Outside the limits of any incorporated city or town
- Rural Primary - All federal & state highways, excluding interstates, outside the limits of any incorporated city or town
- Rural Secondary - Any non-federal or state highway outside the limits of any incorporated city
- Municipal - Within the limits of any incorporated city or town
- Municipal Primary - All federal & state highways, excluding interstates
- Municipal Streets - Any street within the limits of any incorporated city or town other than interstate or other primary
- V.M. - Vehicle miles
- V.M.T. - Vehicle Miles Traveled, the accumulation of the total miles driven on roads by all vehicles

Table 29 – VMT (Vehicle Miles Traveled) by Counties, 2006

VMT BY COUNTIES							
- January 1, 2006 - (all number x 1,000) -							
County	Rural Primary	Rural Secondary	Total Rural	Municipal Primary	Municipal Street	Total Municipal	TOTAL
Sioux	131,970	87,841	219,811	27,734	41,887	69,621	289,432
Lyon	51,594	52,649	104,243	7,110	10,396	17,506	121,749
Osceola	42,007	31,175	73,182	2,097	7,129	9,226	82,408
O'Brien	55,377	46,287	101,664	15,304	18,341	33,645	135,309
Cherokee	54,852	41,329	96,181	9,715	14,971	24,686	120,867
Plymouth	143,440	78,787	222,227	23,412	28,286	51,698	273,925

STREET CLASSIFICATION (DEFINITIONS)

An understanding of the following standard thoroughfare definitions is necessary for the proper understanding of the county's streets plan, as well as reading and comprehending the IDOT's Federal Functional Classification map. The definitions defined below are to be considered basic design guidelines that serve as framework for satisfactory design of new street and highways facilities. The County's Engineer is encouraged to develop the design based on this framework and tailored to particular situations that are consistent with the general purpose and intent of the design criteria through the exercise of sound engineering judgment. Cost effective design is encouraged along with the joint use of the transportation corridor and the consideration of the environment.

The following street classification definitions are in accordance with the 2004 Iowa Statewide Urban Design Standards for public improvements. Streets and highways are functionally classified according to the character of service they are intended to provide. This classification recognizes that individual roads and streets do not serve travel independently. Rather, most travel involves movement through a network of roads and can be categorized relative to such networks in an efficient manner. Thus, classifications of roads and streets are also consistent with categorization of travel. The three major functional classifications for urbanized areas are arterials, collectors, and local streets and are consistent with American Association of State Highway and Transportation Officials (AASHTO).

ARTERIAL STREETS

1. Major/Principal Arterial (Primary Highway Extensions) - The major/principal arterials serves major centers of activity in urbanized areas and carries a high proportion of total urban travel on a minimum of miles. The major/principal arterial system carries most trips entering and leaving the area as well as most of the through movements bypassing the central City. Additionally, significant intra-region travel and outlining residential areas are served by principal arterials. Frequently, the major/principal arterial carries important intra-urban as well as inter-city bus routes. Finally, this system provides continuity for all rural arterials. Access to the principal arterial is specifically limited in order to provide maximum capacity and through movement mobility. Although no firm spacing rule applies in all or even in most circumstances, the spacing between principal arterials may vary from less than one mile in highly developed areas to five miles or more in urban fringes.

2. Minor Arterial (Primary and Non-Primary) - The non-primary arterial connects with and augments the principal arterial system. It accumulates trips of moderate length at somewhat lower level of through movement versus principal arterials. This system places more emphasis on land access but still has specific limits on access points. A minor arterial may carry local traffic providing inter-community service, but typically does not penetrate neighborhoods. This system includes urban connections to rural collector roads where such connections have not been classified as urban principal arterials. The spacing of minor arterials may vary from 1/8 to 1/2 mile in highly developed areas to 2 miles in suburban fringes.

COLLECTOR STREETS

1. Major Collector - This type of street provides for movement of traffic between arterial routes and minor collectors and may at moderately lower speeds collect traffic from local streets and residential and commercial areas. A major collector has control of access to abutting properties with

a majority of access at local street connections. Normally, a slightly higher emphasis is placed on through movements than direct land access.

2. Minor Collector - This type of street provides movement of traffic between major collector routes and residential and commercial local streets as well as providing access to abutting property at moderate low speeds. A consideration for through movements and direct land access is normally equal.

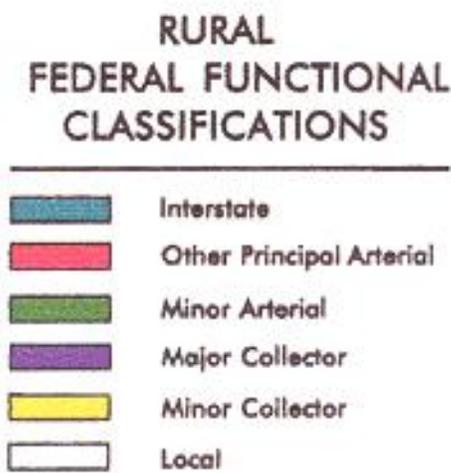
LOCAL STREETS

The local street provides for the movement of traffic between collectors and residential and commercial areas. Local streets provide the direct access to abutting residential and commercial property and carries low traffic volumes at low speeds on relatively short trips. Certain jurisdictions allow private streets in specific situations. Private streets are similar to the local streets but generally are located on dead-end roads less than 250 foot in length, short loop streets less than 600 feet in length or frontage roads parallel to public streets.

FEDERAL FUNCTIONAL CLASSIFICATION OF ROADS

The Iowa DOT 2006 Federal Functional Classification map depicts major transportation routes across Sioux County. Classifications of roads found in the county include principal arterial, minor arterial, major collector, minor collector, and local streets. The county’s federal functional classification map can be seen on the following page.

Furthermore, following the county’s rural federal classification map is another federal functional map indicating the road classifications located within the “Sioux Center Urban Area” and “Orange City Urban Area” located within Sioux County. These two “urban areas” as classified by the Iowa Department of Transportation meet the definition of a small urban center by having a community or combined “urban area” in excess of 5,000 population. These small urban centers or “micropolitan areas” are specifically mapped with designated federal functional classification routes individually. The Sioux Center small urban center has a population base of 6,513 (2005 estimate). The Orange City small urban area which includes the cities of Orange City and Alton has a current population base of 6,892 (2005 estimate).



Federal Functional Classification Map



Figure 36 - Sioux County
Federal Functional
Classification Map

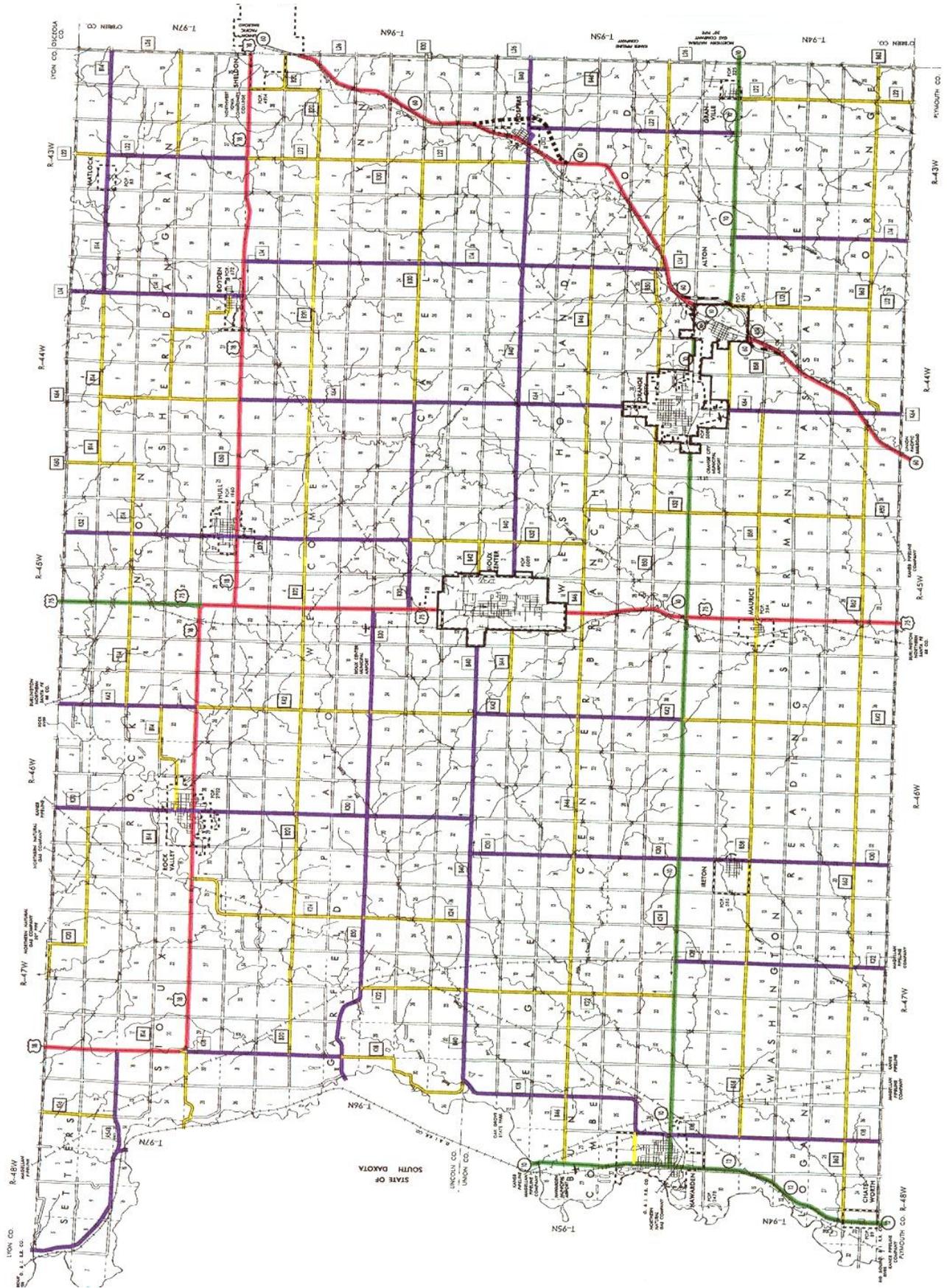


Figure 37 - Sioux Center Small Urban Center Federal Functional Classification Map

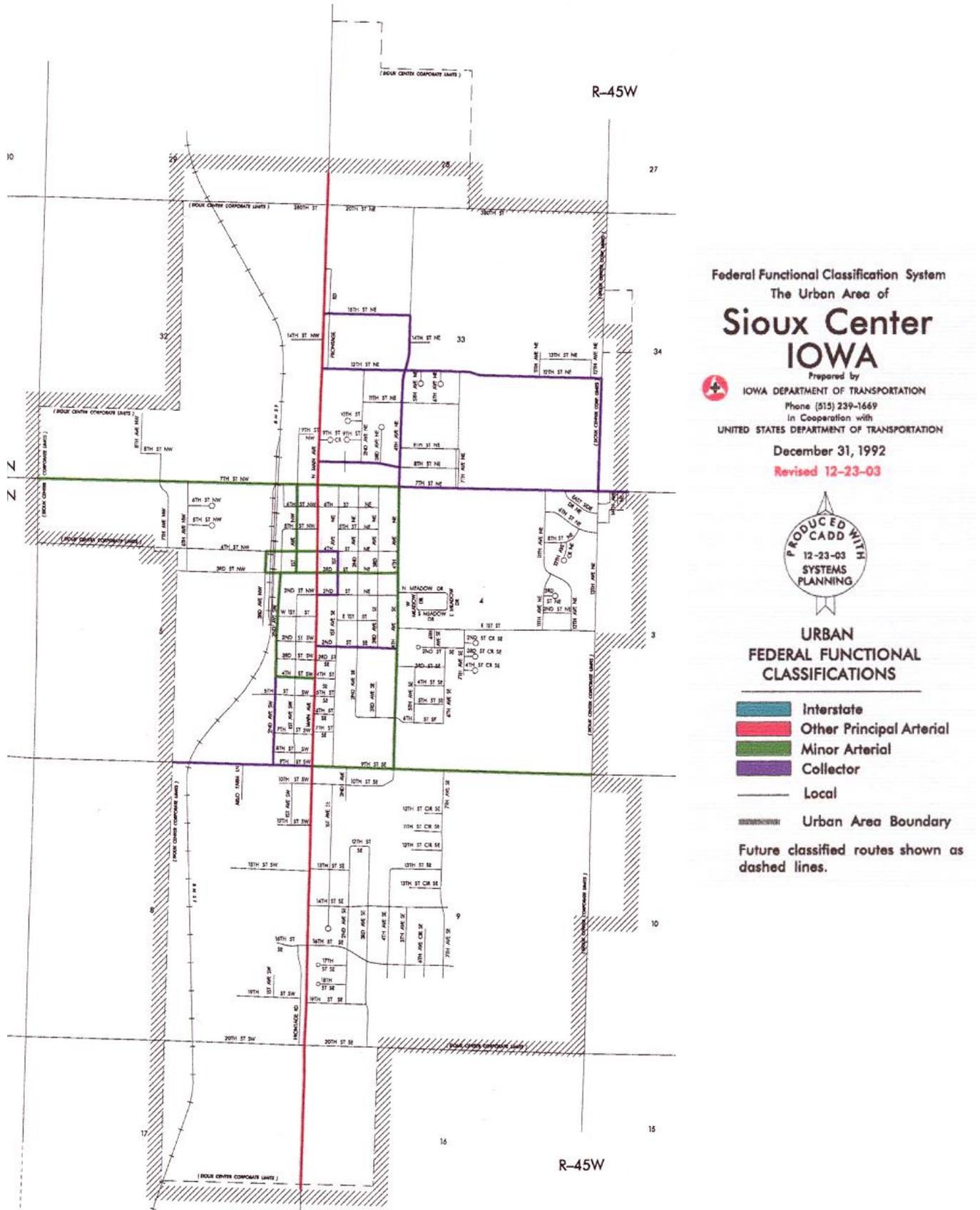
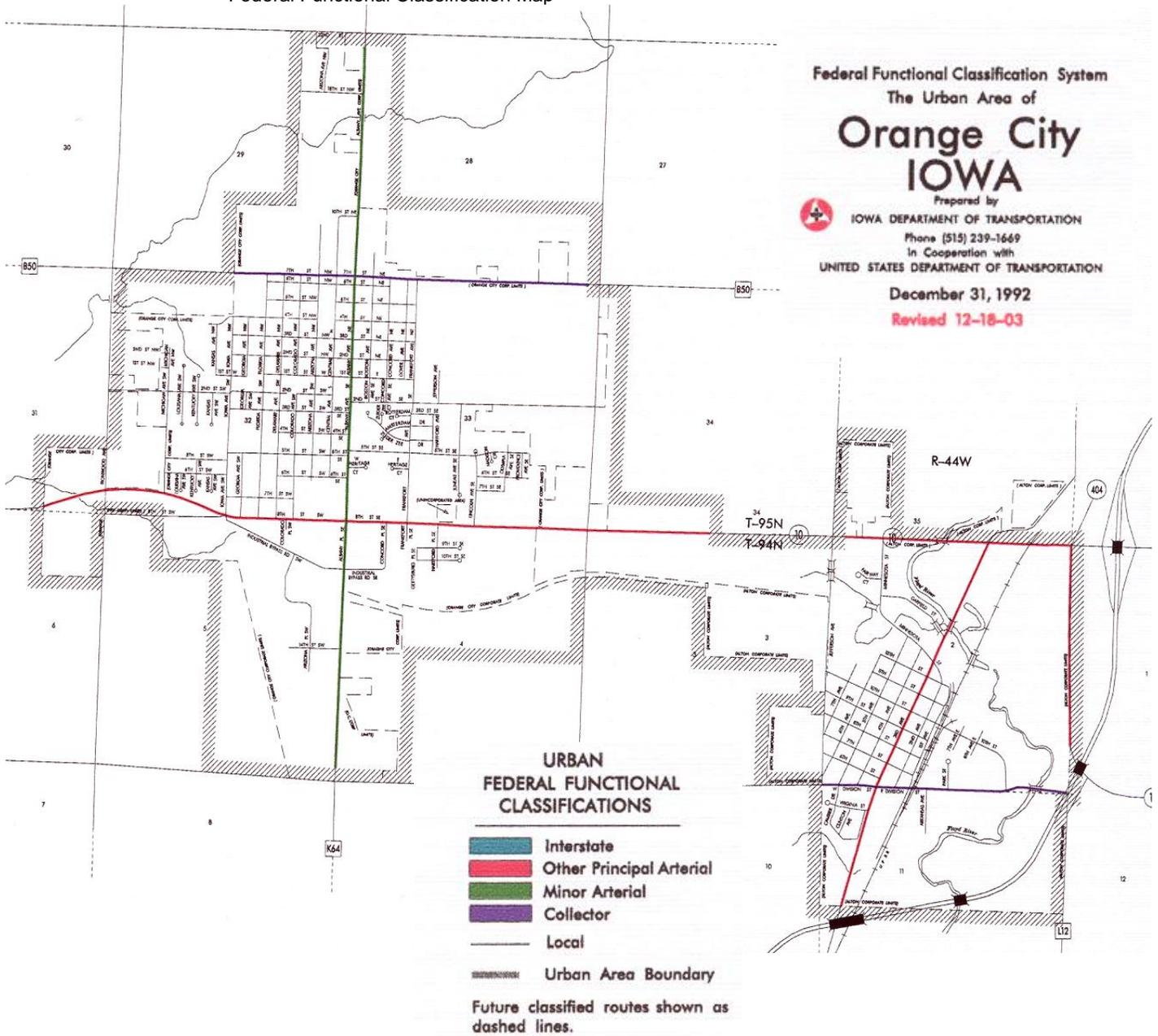


Figure 38 - Orange City Small Urban Center (Orange City & Alton)
Federal Functional Classification Map



SIoux COUNTY 5-YEAR ROAD CONSTRUCTION PLAN

The Sioux County Engineering Department has prepared and annually updates and prioritizes its long-range road construction program. In May 2007, the Sioux County Engineering Department provided the most recent 5-year road construction program for purposes of including in this comprehensive plan. The following road construction plan begins with FY 2008 and identifies road projects through FY 2012. There are 97 overall projects identified and prioritized over this five year time frame. On the following page is a map identifying each of the county's proposed road projects.

**5-Year Street Improvement Plan
Insert Here**

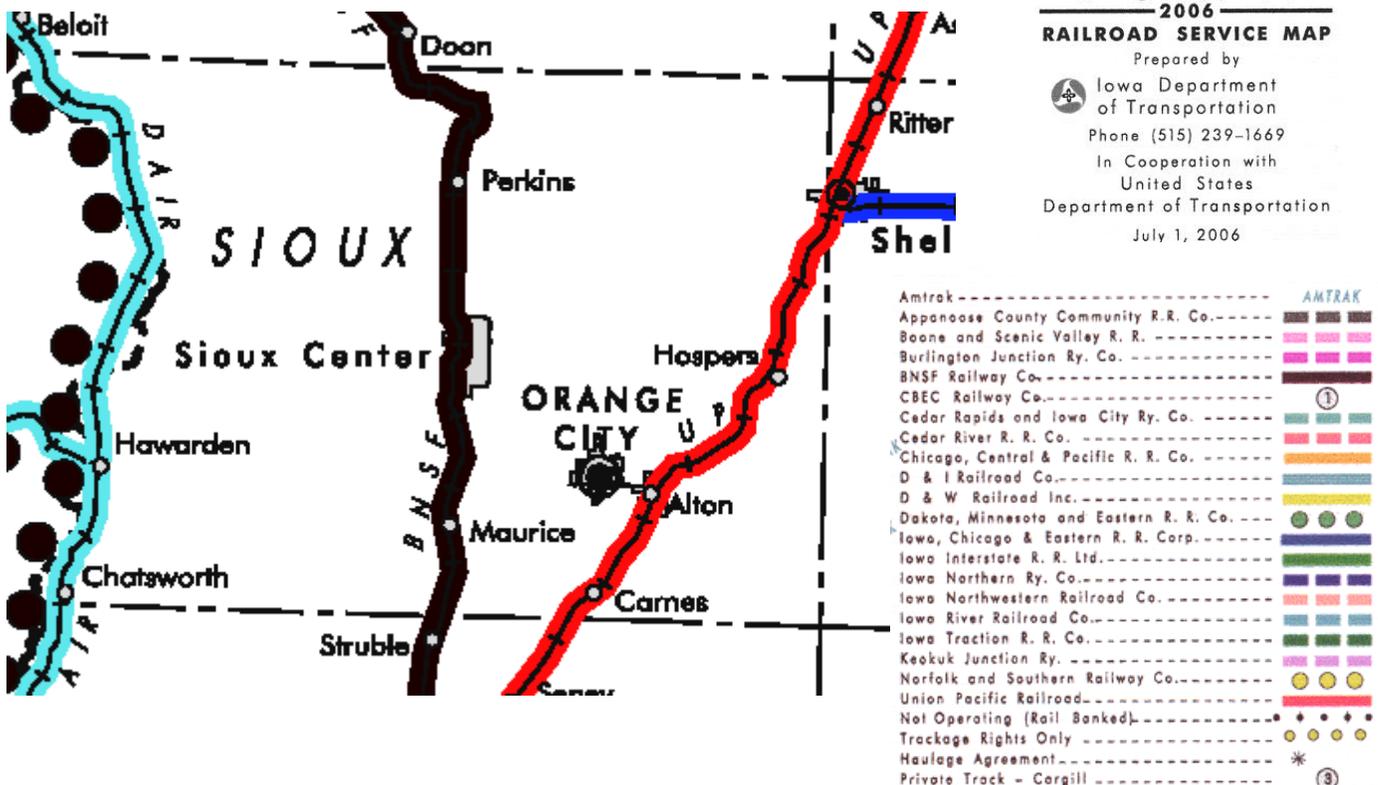
COUNTY PUBLIC TRANSIT SERVICES

The Regional Transit Authority (RTA) dba as *RIDES* is the local transit provider for Sioux County. *RIDES* is the regional transit provider for a nine (9) county region in Northwest Iowa. Specifically for Sioux County, *RIDES* provides fixed route and on demand transit services to several communities in Sioux County. Anyone living in Sioux County can contact the regional transit provider for on demand taxi service to schedule ride either inter-county or anywhere else within the nine county service area covered by *RIDES*. Other services provided to Sioux County residents include the Medivan. When residents of the county need transportation assistance to healthcare appointments, *RIDES* provides a safe, reliable form of transportation.

RAILROAD CONSIDERATIONS

Sioux County is served by two active rail lines transversing the county from north to south. The Burlington Northern Sante Fe (BNSF) line nearly bisects the county in half paralleling the U.S. Highway 75 corridor and serving the communities of Maurice, Sioux Center and Perkins. The Union Pacific (UP) railroad parallels the Iowa Highway 60 corridor serving the communities of Carnes, Alton, Hospers and Sheldon. A third rail line which is partially located in Sioux County and partially in South Dakota is the DAIR line, which is owned by BNSF. This line operates under contracted operating authority on tracks owned by Burlington Northern Sante Fe. As expressed in the agricultural section of this plan, the local grain elevators and alternative fuel plants (ethanol) are the primary sources utilizing rail service in Sioux County for the shipment of their commodities. There is no piggyback ramp available locally; and the nearest one is located approximately 35 miles south in Sioux City.

Figure 39 – 2006 IDOT Railroad Service Map



AIRPORT CONSIDERATIONS

There are three (3) municipal airports identified by the State of Iowa that exist with Sioux County. The Hawarden municipal airport is located approximately 2 miles north of the community adjacent to Highway 10. The Sioux Center Municipal Airport is situated one-half mile west of Highway 75, approximately 3 miles north of Sioux Center. Finally, the Orange City Municipal Airport is located immediately west of the Orange City industrial park on the south side of the community. The Orange City Municipal Airport is the only airport that is located within the city limits.

Hawarden Municipal Airport -

This airport serves the business and recreational needs of the City of Hawarden and residents throughout southwest Sioux County and northwest Plymouth County. The airport is publicly owned and managed by the City of Hawarden. There is one runway measuring 2,030 feet in length by 50 feet wide. The runway surface is concrete and is reported to be in good condition. The Hawarden airport is situated at 1,190 feet above sea level. Services offered include aircraft tie downs and parking. There are five (5) single engine aircraft based on the field. Aircraft operations average 37 per week with 43% for local general aviation, and 57% for transient general aviation. The nearest airport offering instrument procedures is Sioux Center, located 15 miles northeast. The closest international air service can be found at the Sioux City, IA or Sioux Falls, SD airports.

Photo of Hawarden Airport



Sioux Center Municipal Airport -

This airport serves the business and recreational needs of the City of Sioux Center and nearly all of northern Sioux County. The airport is publicly owned and managed by the City of Sioux Center. There is one runway measuring 3,802 feet in length by 50 feet wide. The runway surface is concrete and is reported to be in good condition. The Sioux Center airport is situated at 1,448 feet above sea level. Services offered include aircraft hangers, parking tie downs, and aviation fuel sales. There are 13 aircraft based on the field, with nine being single engine and four multi engine airplanes. Aircraft operations average 112 per week with 71% for local general aviation, 16% for transient general aviation, 12% for air taxi and less than 1% for military purposes. The closest commercial and international air service can be found at the Sioux City, IA or Sioux Falls, SD airports.

Photo of Sioux Center Airport



Orange City Municipal Airport -

This airport serves the business and recreational needs of the cities of Orange City and Alton, and residents throughout southeast Sioux County. The airport is publicly owned and managed by the City of Orange City. There is one primary runway measuring 4,250 feet in length by 60 feet wide. The runway surface is concrete and is reported to be in good condition. The Orange City airport is situated at 1,414 feet above sea level. Services offered include aircraft hangers, parking tie downs and aviation fuel sales. There are five (5) aircraft based on the field, with three being single engine and two multi engine airplanes. Aircraft operations average 65 per week with 43% for local general aviation, and 57% for transient general aviation. The closest commercial and international air service can be found at the Sioux City, IA or Sioux Falls, SD airports.



Photo of Orange City Airport

The locations of two of Sioux County's three municipal airports present planning problems. The Orange City airport, although the largest airport in Sioux County, is situated too close to existing businesses and structures to maximize the potential use of the airport. The airport is surrounded by land that is highly suited for urban-type commercial and industrial land uses. Furthermore, although the Sioux Center municipal airport is the county's busiest airport, this aging and undersized airport is inconveniently located from benefiting commercial and industrial uses in Sioux Center. Over the past several years, the cities of Sioux Center and Orange City have been debating constructing new airports for each of their municipalities. After much discussion and feasibility studies were completed on each city, it was finally decided by both communities and Sioux County that it would be in the best interest of all Sioux County residents that only one (1) new regional airport be built. This new Sioux County regional airport, proposed to be constructed approximately 1 mile southeast of the intersection of Highways 10 and 75. This new regional air facility will be conveniently located between the two largest cities of Orange City and Sioux Center in Sioux County and will provide business, residential, and recreational aviation needs of the entire county.

PUBLIC WATER SUPPLY USE

The following information comes from the Iowa Plan Survey created in 1994 by the Iowa Department of Natural Resources. This plan was designed to provide a comprehensive look into the state's public and private water supplies, users, and systems across Iowa. Below is a chart which identifies all of the public water supplies in Sioux County. Although, this information is somewhat dated, the data should provide a useful picture of general trends and the overall scope of water usage throughout Sioux County.

Table 30 - Public & Private Water Supplies Located in Sioux County

SYSTEM NAME	SYSTEM TYPE^a	TOTAL CONNECTIONS	WATER SOURCE TYPE	TOTAL ANNUAL USE mgy^b
Siouxpreme Packing Co.	IND	0	Wells	42.4
City of Alton	M	439	Wells	32.5
City of Boyden	M	300	Wells	30.4
City of Granville	M	168	Wells	10.5
City of Hawarden	M	1,130	Wells	213.0
City of Hospers	M	305	Wells	75.0
City of Hull	M	674	Wells	63.2
City of Matlock	M	44	Wells	2.3
City of Rock Valley	M	1,032	Wells	143.8
Ireton Water Dept	M	231	Wells	25.0
Maurice Water Supply	M	107	Wells	8.9

SYSTEM NAME	SYSTEM TYPE ^a	TOTAL CONNECTIONS	WATER SOURCE TYPE	TOTAL ANNUAL USE mgy ^b
Orange City Municipal Water	M	1,652	Wells	264.0
Sioux Center Municipal Water Utility	M	1,766	Wells	328.0
Lyon & Sioux Rural Water District	RW	246	Wells, Purchase ^c	57.5
Rock Valley Rural Water District	RW	457	Wells	153.9
Rural Water System #1	RW	905	Wells	241.9
Southern Sioux County RWA	RW	528	Wells	89.1
TOTAL USE				1,781.4

Source: Iowa Plan Survey, 1994.

^a IND = industry; M = municipal; RW = rural water system

^b mgy = million gallons per year

^c Purchased from Rock Rapids.

Note: totals may not agree due to rounding.

The water used by public water systems in Sioux County comes from wells tapping into the regional surficial (shallow) aquifers and the deeper Dakota aquifer. Treatment purposes utilized by municipal and public water supplies across Sioux County include iron removal, manganese removal, disinfection, stabilization, taste and odor control and fluoride addition. As of the date of publication of the Iowa Plan Survey, there was nearly 6 million gallons of storage capacity for treated water by public water supplies in Sioux County.

RURAL WATER SYSTEMS

Inadequate water supply, in terms of both quality and quantity, had been a major problem for rural residents of Sioux County for many years. In an effort to improve the quality and availability of water supply for residents, businesses and agricultural purposes, a group of interested rural homeowners began organizing and researching alternatives for development of a centralized water system. Within Sioux County today, there exist service territories of four separate rural water systems. Most of the southern portion of the county is served by the Southern Sioux County Rural Water System (Ireton). Most of the central portion of the county is served by the Rural Water System No.1 (Hospers). Most of the northern portion of the county is served by the Rock Valley Rural Water District (Rock Valley) and Lyon and Sioux Rural Water System (Rock Rapids in Lyon County). With the quality water product and service provided by these rural water systems today is a vast improvement from years past. The continued growth and expansion of rural water systems in Sioux County has opened the door for rural economic development in terms of offering a basic yet essential service for businesses, industries, agricultural operation, and single family residences.

Southern Sioux Rural Water System (Ireton)

Southern Sioux Rural Water is headquartered in Ireton in southwest Sioux County. The service territory stretches from the Big Sioux River and Hawarden east toward Orange City and Alton. Southern Sioux rural water serves nearly all customers south of Highway 10 to the county line. The system's water supply is provided by two shallow wells (60-70 feet deep) and one deep well (450 feet deep). The shallow wells, capable of producing 300 gallons per minute, were dug near the West Branch Floyd River. The deep well is capable of producing 500 gpm. Because the water in this region and across much of Sioux County contains iron and manganese in objectionable concentrations, Southern Sioux constructed a water treatment plant to remove these minerals materials. The Maurice Water Tower is of 200,000 gallon capacity, the Ireton Tower is of 125,000 gallon capacity, and the Craig Tower is of 100,000 gallon capacity. The distribution system is a vast network of pipe and valves which transports the water from the treatment plant and towers to the consumers. The pipe ranges in diameter from 2 inches to 10 inches. The distribution system is designed to provide water to the members at an average pressure of 50-70 psi. Each connection is equipped with a pressure regulator to reduce higher pressures to this range. Meters are installed in users' basements or in frost-free meter pits. The creation of the Southern Sioux County Rural Water System came about because of a need for a good quality water supply. The water system reliably provides its members with adequate quantities of safe, pressurized water.



Rural Water System No. 1 (Hospers)

Rural Water System No.1 (RWS No.1) was established in 1969 and has a long running reputation of bringing quality water to its customers. RWS No.1 is headquartered in Hospers in east central Sioux County. The rural water system's service territory covers a majority of the central third of the county between Highway 10 and Highway 18 spanning from nearly the Big Sioux River on the west to the eastern border of Sioux County. RWS No.1 covers areas including Lebanon, Carmel, Sioux Center, Middleburg, Newkirk, Boyden, Hospers, Granville and Sheldon. The system's water supply is provided by a series of shallow and deep wells. One cluster of wells is

Photo of RWS No.1 Water Tower



Photo of RWS No.1 Water Treatment Plant



located east of Sioux Center along County Highway B40 near the West Branch of the Floyd River. The second series of wells is located 2 miles north of Hospers next to the Floyd River. A water treatment plant was constructed next to the well field north of Hospers. Currently, there are four water towers located in Sioux County and two more towers in O'Brien County. The four water towers in Sioux County are located approximately two miles east of Lebanon, one mile north of Sioux Center, two miles west of Newkirk and three miles east of Middleburg. The RWS No.1 strives to bring its customers, including residential, commercial and agricultural, a quality, safe, palatable water supply.

Note: Photos courtesy of Rural Water System No.1 website

Rock Valley Rural Water

Rock Valley Rural Water is headquartered in the City of Rock Valley in northwestern Sioux County. The water district's service territory is approximately 26 miles across (east/west) and 12 miles from north to south. One of the smaller rural water district, Rock Valley Rural Water stretches from the far northwestern corner of Sioux County in Settlers Township to approximately 5 miles east and 5 miles south of Hull. Rock Valley is responsible for providing the backup and blended water supply to Rock Valley and all of the City of Hull's water supply. Rock Valley Rural Water also serves a number of rural residential and agricultural customers. The system's water supply obtains its water from the alluvial aquifer near the Rock River. Water towers holding treated water for Rock Valley rural water customers can be found just east of Highway 18 northwest of Rock Valley and approximately 2 miles southeast of Rock Valley. The creation of the Rock Valley Rural Water district is somewhat unique from the other three rural water systems in Sioux County. Unlike the other three rural water systems which are legal non-profit corporations, the Rock Valley Rural Water District was formed as a partnering agency through a 28e intergovernmental agreement with Sioux County. Rock Valley is closer to a governmental agency than a non-profit agency; however, the rural water district is governed by its own Board of Directors and does not report to or is governed by Sioux County.

Lyon & Sioux Rural Water System (Rock Rapids in Lyon County)

Lyon and Sioux Rural Water System (LSRWS) is headquartered in Rock Rapids in Lyon County, to the north of Sioux County. Within Sioux County, the service territory of LSRWS stretches from just north of Hull east to Boyden and then toward Sheldon. The service territory is primarily limited to that land between Sheldon and Hull from Highway 18 north to the Sioux/Lyon county border.

Following this section is a map depicting the service territories of each of the four rural water systems serving customers in Sioux County.

Sioux County Rural Water Districts – Service Territories Map

Chapter 14. COUNTY SERVICES

The Sioux County courthouse is open Monday through Friday from 8:00 a.m. to 4:30 p.m. There are many county services, departments, and programs operated from within or nearby the courthouse. Listed below is a summary of Sioux County services and contact information for these county departments or programs:

- Auditor, Lois Huitink, Courthouse, 712/ 737-2216
- Assessor, Ross Simmelink, Courthouse, 712/ 737-4274
- Clerk of Court, Courthouse, 712/ 737-2286
- County Attorney, Coleman McAllister, Orange City 712/ 737-2457
- Conservation Board, Rob Klocke, Hawarden (Oak Grove), 712/ 552-1047
- Community Health, 712/ 737-2971 or 800/ 435-3454
- Community Services, Shane Walter, Courthouse, 712/ 737-2999
- Emergency Management, Jim Raymond, Public Safety Center, 712/ 737-9010
- Engineer, Doug Julius, Courthouse, 712/ 737-2248
- Information Technology, Micah Van Maanen, Courthouse, 712/ 737-6818
- Recorder, Anita Van Bruggen, Courthouse, 712/ 737-2229
- Sheriff, Dan Altena, Public Safety Center, 712/ 737-2280
- Treasurer, Randy Feenstra, Orange City, 712/ 737-3505
- Veterans Affairs Commission, Shane Walter, Courthouse, 712/ 737-2999
- Zoning, Shane Walter, Courthouse, 712/ 737-2999

Figure 40 – Sioux County Board of Supervisors District Map

Sioux County Board
of Supervisors
712/ 737-2216

District 1 –
John Degan

District 2 –
Arlyn Kleinwolterink

District 3 –
Vern Beernink

District 4 –
Mark Sybesma

District 5 –
Denny Wright



Zoning & Subdivision Review

Sioux County has established and enforces zoning regulations. Permits are required for new construction of all principal and accessory buildings and structures. The county zoning administrator is responsible for zoning compliance and enforcement, administering zoning permits and forms, and administering Planning and Zoning Commission and Board of Adjustment meetings.

FIRE PROTECTION SERVICES

Sioux County Townships are serviced by several municipal fire departments. Listed below are the individual fire departments located in Sioux County, and the rural townships served by these departments.

Sioux Center Fire Department

Currently this community has one (1) fire station in operation with 36 volunteer fire fighters. Their area of service includes parts of the following Townships: Center, Plato, Welcome, Capel, Holland, Garfield, and West Branch. Their Fire Department's services include:

- o Fire Protection
- o Fire Prevention
- o Heavy Rescue

Sioux Center Ambulance

Currently includes the following:

- o 3 - A.C.L.S. (Advance Cardiac Life Support) equipped ambulances
- o 1 off-road transport unit
- o Provisional Level I
- o 6 EMTs
- o 14 EMTBs
- o A total of 28 volunteers
- o 5 paramedics
- o 3 Drivers

Thirty-six volunteer fire fighters are trained at the Operational level for hazardous materials handling. The ambulance division has six volunteers trained at the Awareness level for hazardous materials.

Orange City Fire Department

This county-seat community has one (1) fire station in operation with 30 volunteer fire fighters. Their area of service includes parts of the following Townships: Nassau, Capel, Holland, Sherman, and West Branch. Their Fire Department's services include:

- o Fire Protection
- o Fire Prevention
- o Heavy Rescue

Orange City Ambulance

Currently includes the following:

- o 2 - A.C.L.S. (Advance Cardiac Life Support) equipped ambulances
- o 1 off-road transport unit
- o Provisional Paramedic
- o 21 EMTs
- o 2 EMTIs
- o A total of 30 volunteers
- o 4 paramedics
- o 1 Driver

Thirty Orange City volunteer fire fighters are trained at the Operational level for hazardous materials handling. The ambulance division has twelve volunteers trained at the Awareness level.

Rock Valley Fire Department

Currently this community has one (1) fire station in operation with 30 volunteer fire fighters. Their area of service includes the following Townships: All of Rock, and part of Sioux, Garfield, and Plato. Their Fire Department's services and equipment include:

- o Fire Protection
- o Extraction unit (Jaws of life)
- o Thermal Imaging Camera
- o Fire Prevention
- o Bullet saw/ K-12 saw
- o Gas monitor

Rock Valley Rescue

The rescue department has 27 volunteers (2 first responders, 25 EMT's) and their service area is the same as the fire department. Their services and equipment include:

- 2 defibrillators
- 2 Ambulances

Thirteen Rock Valley volunteer fire fighters are trained at the Operational level for hazardous materials handling, while another seven fire fighters are trained at the Awareness level. Additionally, one fire fighter is trained at the Fire Fighter One level, another is trained at the Fire Fighter Two level and one volunteer fire fighter in Rock Valley is a certified instructor.

Hawarden Fire Department

Currently this community has one (1) fire station in operation with 29 volunteer fire fighters. Their area of service includes 10 square miles and covers portions of the following Townships: Logan, Buncombe, Virginia. Their Fire Department's services include:

- Fire Protection
- Specialized Fire Prevention
- Extraction unit (Jaws of life)
- Thermal Imaging Camera (infra-red)
- Cascade system

Hawarden Rescue

The EMS department has 22 volunteer and their service area is the same as the fire department. Their services and equipment include:

- 2 ambulances
- EMTBs - 13
- Provisional EMTs - 3
- Paramedic – 1
- The rest are drivers

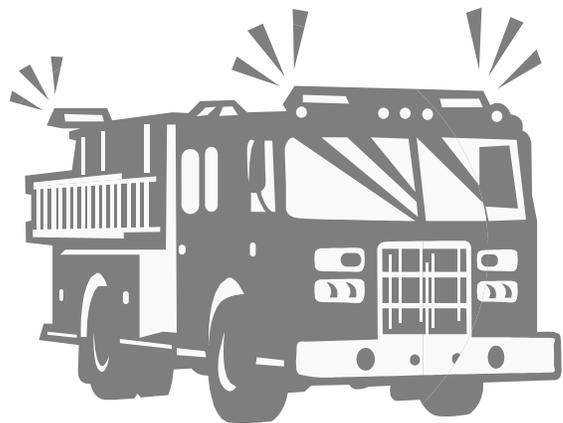
Seventeen Hawarden volunteer fire fighters are trained at the Operational level for hazardous materials handling. Additionally, seventeen fire fighters are trained at the Fire Fighter One level, while another one is trained at the Fire Fighter Two level.

Hull Fire Department

The Hull Fire Department consists of 25 volunteer fire fighters. Hull provides local and rural fire protection, and is capable of handling hazardous materials.

Their services and equipment include:

- Fire protection/fire prevention
- 25 persons trained at Firefighter 1
- Hazmat training
- Emergency rescue training
- Partners with the Sioux Center fire department
- 1991 pumper truck
- 1993 pumper truck
- Recently renovated rescue truck



Alton Fire Department

The Alton Fire Department consists of 24 volunteer fire fighters and four volunteers are certified rescue. Their department provides fire protection services and response to hazardous materials at the operational level. The Alton volunteer fire fighters provide local and rural fire protection, and are capable of handling hazardous materials. The department's services and equipment include:

- Fire protection
- Fire prevention

Four emergency response vehicles, including:

- Tanker truck
- Equipment van
- Pumper truck
- Ambulance

Alton Rescue and Ambulance

The Alton rescue and ambulance has roughly ten volunteers and their service area is the same as the fire department. Their services include:

- An ambulance
- EMTs - 2
- First responders - 6

Boyden Fire Department

The Boyden Fire Department consists of 15 volunteer fire fighters. Their department provides fire protection services and basic response to hazardous materials. The Boyden volunteer fire fighters provide local and rural fire protection to adjacent townships. The department's services and equipment include:

- Fire protection
- 1997 AMTE Ambulance service and a second ambulance
- Fire prevention

Four emergency response vehicles, including:

- 1979 Fire truck
- Rescue truck
- 1999 Fire truck
- 2004 water tanker

Hospers Fire Department

Currently, there are 18 volunteer fire fighters that comprise the Hospers Fire Department. The department provides fire protection and response services to hazardous materials. The Hospers volunteer fire department provides local and rural fire protection to adjacent townships.

Hospers Rescue Squad

In addition to the volunteer fire department, the Hospers Rescue Squad also provides ambulance and emergency response services to residents of the community and surrounding rural areas. Currently, there are 11 members of the Hospers Rescue Squad team. These emergency response personnel include:

- 8 - EMTBs
- 2 - First Responders
- 1 - Paramedic

Ireton Fire Department

The Ireton Fire Department consists of an estimated 30 volunteer fire fighters. Their department provides fire protection services and basic response to hazardous materials. The Ireton volunteer fire fighters provide local and rural fire protection to adjacent townships. The department's services and equipment include:

- Fire protection
- Tanker truck
- Equipment/field truck
- Fire prevention
- Pumper truck

Ireton Ambulance

The Ireton ambulance service is a provisional B unit which is capable of response and transport of patients. The ambulance crew has 14 volunteers and their service area is the same as the fire department. Their services include:

- Two ambulances
- EMTBs – 8
- RN exceptions -2
- First responders - 4

Maurice Fire Department

The Maurice Fire Department consists of 18 volunteer fire fighters. Their department provides fire protection services and basic response to hazardous materials. The Boyden volunteer fire fighters provide local and rural fire protection to adjacent townships. The department's services and equipment include:

- Fire protection/fire prevention
- First Responder – 1
- EMTs -4
- EMT equipment van – no transport of persons

Emergency response vehicles, including:

- Mini-pumper/rescue truck
- Water tanker
- Fire truck
- Antique fire truck (show purposes only)

Granville Fire Department/EMS

Currently this community has one (1) fire station in operation with 20 volunteer fire fighters. The volunteer fire department has 4 EMS for Hazmat operations and 5 paramedics. There are 2 fire fighters classified as Fire Fighter II, 18 fire fighters are classified as Fire Fighter I and 15 as Operations. The EMS has 4 Emergency Rescue Techs (ERTs) and the Ambulance has 2 EMT I, 5 EMTBs, and 4 First Responders. The fire department/EMT/Ambulance area of service for both EMS and Fire Protection includes all of the following Townships or parts thereof: East Orange Township (Sioux County), part of Floyd Township (Sioux county), part of Baker Township (O'Brien County), and part of Caledonia Township (O'Brien County) for EMS only. Their Fire Department's services include:

- Fire Protection
- Extraction unit (Jaws of life)
- Fire Prevention
- Ambulance

The two remaining incorporated cities in Sioux County, Matlock and Chatsworth, both with less than 100 residents contract for fire protection services from larger nearby communities, similar to contracted fire protection for the seven unincorporated towns of Perkins, Carmel, Lebanon, Newkirk, Middleburg, Carnes, and McNally. Rural residents are also provided with contracted fire protection services from the above mentioned fire departments.

COUNTY LAW ENFORCEMENT

The Sioux County Sheriff's Office is responsible for enforcing the laws of the State of Iowa and the ordinances of Sioux County. Currently, the department employs 12 full-time deputies and nine reserve officers, including a chief deputy, captain and three sergeants. Aside from patrolling the unincorporated areas of the county, the Sheriff's Office also contracts for police protection with the cities of Boyden, Chatsworth, Granville, Hospers, Hull, Matlock and Maurice. The Office is responsible for protecting and serving more than 750 square miles and nearly 33,000 residents of Sioux County.

Mission Statement:

The Sioux County Sheriff's Office is committed to maintaining the public's trust, providing protection, and professional leadership, by utilizing our skills and resources with integrity.



The seven point star with the Sheriff's Seal, which they wear on their uniform, represents their loyalty and trust to the justice system and the people they represent.

The Sioux County Jail is housed in the recently constructed Sioux County Public Safety Center located approximately 1 mile northwest of Orange City. This facility includes a 67 bed jail containing six pods. Each pod is a separate holding facility equipped with cells, restrooms, showers, and a day room utilized for eating and recreation. The pods vary in cell numbers and allow the corrections officers to categorize inmates such as by male or female, work-release, pre-sentenced versus sentenced, and misdemeanors versus felons. The jail is staffed 24 hours a day, seven days a week. The Sioux County Public Safety Center also contains a large indoor recreation area for inmates, booking and processing center, medical room, and control room. The officer working the control room monitors all inmate activity going on within the facility.

The Sioux County Sheriff's Department is comprised of five (5) divisions working together to provide the best possible law enforcement to the county's residents.

- The Patrol Division – includes the twenty-one officers mentioned above which are responsible for patrol, traffic enforcement, and patrol within the contracted municipal jurisdictions.
- The Criminal Investigation Division – is comprised of those law enforcement officers working with on-going criminal investigations, crime prevention and education, and sex offender information.
- The Special Units Division – includes involvement with the canine unit, Crimestoppers program, NW Iowa Drug Task Force, Project Lifesaver program, and special response team.
- The Correction Division – is comprised of those corrections officers, jailers, and other employees that work with the inmates at the Public Safety Center.
- Civil Division – accounts for that segment of the Sheriff's Department dealing with reporting, evictions, civil papers, Sheriff's sale, and weapons permits.

LANDFILL & RECYCLING SERVICES

Solid Waste Landfill

Landfill services for all of the cities and rural portions of Sioux County are provided by the Northwest Iowa Area Solid Waste Agency. This solid waste landfill was formed in 1972 and is located at 4540 360th Street or 3 miles south of Sheldon on Highway 60, then 1/2 mile west on 360th St. As expressed in an informational brochure produced by the Northwest Iowa Solid Waste Agency in 2001, the intended purpose of the agency is to provide cost effective and environmentally sound solid waste management options to the citizens of Sioux, O'Brien, Osceola, Clay and Lyon Counties. Overall goals or the mission of the solid waste agency is expressed as:

1. To operate cost effective and environmentally sound facilities.
2. To comply with Federal and State solid waste management regulations for operating agency facilities, including compliance with waste management hierarchy.
 - a. source reduction
 - b. incineration with energy recovery
 - c. incineration for volume reduction
 - d. recycling
 - e. landfilling
3. To educate the users of the Agency facilities about proper waste management.

Recycling Services

In addition to providing the landfill services, the Northwest Iowa Area Solid Waste Agency is also the leading recycling provider for Sioux County residents. The future of solid waste is continuing to evolve under more stringent regulations, and more sorting will increasingly be required. Future recycling endeavors and continued sorting of solid waste will necessitate the cooperation of both local governments and public to become more involved in recycling solid waste materials. Residents of Sioux County are able to sort and recycle six separate kinds of materials, including plastic, glass, paper, cardboard, tin cans and aluminum. Recycled materials should be kept clean and free of waste and not mixed with garbage. Below is a chart from the Northwest Iowa Area Solid Waste Agency's brochure which describes those materials which are recyclable and non-recyclable in Sioux County.

Table 31 - Northwest Iowa Area Solid Waste Agency list of Recyclable Items

<u>Recyclable</u>	<u>Non-Recyclable</u>
1. Plastics	
The two basic varieties of plastic being recycled are clear and colored. This includes milk jugs, laundry bottles, dishwashing bottles, shampoo bottles, and any container that holds a liquid (#1 and 2). [Pretty much, if you can crush it, you can recycle it.]	Styrofoam, saran wrap®, bread wrappers, shopping bags, fast food containers, rigid plastics, laundry bags and disposable diapers. Plastic shopping bags should be returned to the store where purchased or disposed in the garbage.
2. Glass	
Currently the recycling center will NOT recycle glass.	All Glass is now NON-RECYCLABLE.
3. Paper (and Cardboard)	
Newsprint, computer, white ledger, brown paper shopping bags and corrugated cardboard are acceptable. Cardboard and newsprint can be boxed, bundled or bagged in paper bags (not plastic bags)	Waxed paper, waxed cardboard, advertising, magazines with glossy paper, envelopes with gum labels or plastic windows, shoe boxes, cereal boxes, toilet paper, pop and beer boxes are not recyclable.

Source: Northwest Iowa Solid Waste Agency brochure, 2001

Regarding the disposal and/or recycling of other specialized or unique items, the following regulations apply at the Northwest Iowa Area Solid Waste Agency.

Tires: Can be brought to the landfill, but disposed of for a fee and only on the designated tire pile.

Used Oil: Disposed of at a tank located at the landfill or at many local gas stations.

Lead Acid Batteries: May be disposed at a designated area in the landfill for lead acid (car) batteries. Many local retailers will also dispose of these batteries upon request, or for a small fee.

Concrete: May be disposed of in the landfill south of the tree pile, if it is clean.

Metals: Iron, tin, white goods and wire can be disposed of at most local scrap metal dealers in Sioux County, or the landfill will also take these items as long as they are separated from regular garbage.

Pesticide Containers: need to be "pressure rinsed" or punctured triple rinsed. These can be brought to the landfill or returned to the business where purchased.

Paints, household chemicals and yard waste are not accepted at the landfill.

COUNTY UTILITIES & SERVICES

- Electricity (rural providers)

Current electrical service to rural residents and businesses in Sioux County is provided through MidAmerican Energy and Northwest REC (Rural Electric Cooperative).

- Natural Gas

MidAmerican Energy and Northwest REC, the same as mentioned above, are also the counties suppliers of natural gas to rural customers.

- Telecommunications (including telephone, cable and internet providers)

Providers of local telecommunications services in Sioux County include:

Hospers Telephone Company	Westel Telephone Company
Quest/CO Tax Partners LLC	Hickory Tech Communications
Birch Telecom	Orange City Communications (CLEC)
City of Hawarden Hi Tec (CLEC)	Citizens Communications
Northwest Iowa Telephone Company	Premier Communications
AT&T	Iowa Telecom
Trinsic Communications	

- Cellular Service

Many local, regional and nationwide cellular phone companies offer service within Sioux County, including:

US Cellular	Midwest Wireless
Verizon Wireless	Nextel Partners
Cingular Blue	Wireless Network Management
Suncom (Telecorp)	

HEALTH CARE FACILITIES & SENIOR CARE

Orange City Area Health System

Orange City Area Health System (OCAHS) is a comprehensive health system including clinics, medical specialists, a hospital, a retirement community and nursing homes. Since its founding in 1960, OCAHS has adhered to the vision of its founders by providing the finest health care available. The organization is a municipally held, non-profit organization which does not receive tax dollars for its work.



In 2006, OCAHS opened its doors to a new state-of-the-art campus in southeast Orange City, just south of Highway 10. This \$20 million dollar project reflected the needs, desires, and commitment of the hospital, city, and community at large toward the healthcare services in Orange City and much of southeast Sioux County. Today, there are nearly 500 medical professionals, skilled employees and dedicated volunteers working within the OCAHS, which continue the caring tradition in meeting the needs of patients, residents and families of Northwest Iowa.

Sioux Center Community Hospital & Health Center

Sioux Center Community Hospital & Health Center/ Avera Health is proud to serve the total healthcare needs of Sioux Center and its surrounding communities. The mission of this facility is to provide a ministry of optimal health care and outreach services through progressive care, education, cooperation and community involvement.



From pediatrics to geriatrics, routine check-ups to emergency care, these facilities are well-equipped with the most advanced, up-to-date technology suited to meet our patients' health needs. Our staff is dedicated to providing and cultivating health care services that are convenient, affordable, and personalized for our patients.

Hegg Memorial Health Center (Rock Valley)

Hegg Memorial Hospital offers a variety of services to the residents of Rock Valley and northwest Sioux County. The hospital's mission is to serve with compassion, professionally promoting physical, psychological and spiritual well-being. Hegg Memorial is committed to partnering with healthcare professionals and employees to develop and improve health services that are responsive to the public's needs.



Experienced nursing staff provides compassionate care of pediatric through adult aged patients using professional practice standards and continuing education. The hospital strives to be patient advocates, respecting privacy and confidentiality. General areas of service provided at Hegg memorial include maternity/child care, surgical care, emergency services, swing bed care, special

care, outpatient care, and specialty clinics in which many services are provided such as outpatient blood transfusions, IV Therapy, injectable medications, chemotherapy, epidural floods, and a variety of in-house and mobile diagnostic testing.

Hawarden Community Hospital

The Hawarden Community Hospital (HCH) offers the residents of Hawarden and southwest Sioux County a wonderful team of healthcare professionals and a broad



scope of medical services close to home. The HCH is a leader in integrated rural healthcare, improving the health and well being of our region. The hospitals mission is to provide for the health and wellness of all the people in our communities through the delivery of quality services. The HCH is a critical access hospital and an integral component of the City of Hawarden. General areas of service provided at Hawarden Community Hospital include an extensive variety of outpatient services, physical therapy, emergency services, inpatient services and patient assistance.

Senior/Long Term Care Facilities

Aside from the four hospitals identified on the previous pages, there is ten (10) long term care or senior care facilities located in Sioux County which provide a number of needed healthcare and residential care services for county residents. With a continuing aging population in Sioux County, as well as throughout the entire State of Iowa, facilities such as the ones identified below will continue to play an important role in providing a sound quality of life and adequate healthcare services for senior residents.

1. Landsmeer Ridge Retirement – Orange City
2. Heritage House Nursing Home – Orange City
3. Pioneer Memorial Home – Orange City
4. Hope Haven Residential Treatment Center – Orange City
5. Kosgrove Estates – Sioux Center
6. Crown Point Assisted Living – Sioux Center
7. Royale Meadows Nursing Home – Sioux Center
8. Hass Hillcrest Care Center – Hawarden
9. Bee Hive Homes – Hawarden
10. Pleasant Acres Care Center - Hull

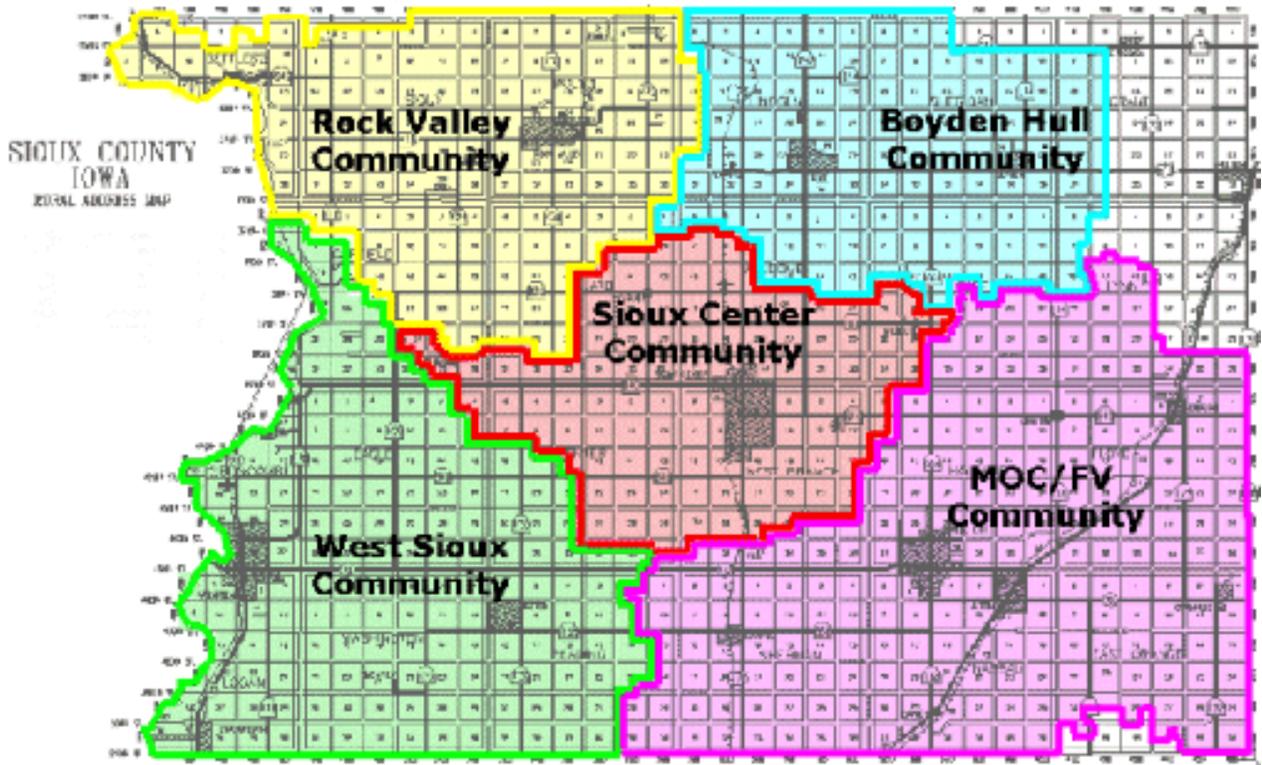
EDUCATION

Within Sioux County, there exists five (5) primary public school districts, of which include Rock Valley Community, Boyden Hull Community, Sioux Center Community, MOC/Floyd Valley Community, and West Sioux Community. In addition to the five districts mentioned above, portions of three (3) additional school districts in neighboring counties also exist within Sioux County. The largest of these is the Sheldon Community School District which encompasses a large segment of land within the northeast corner of the county, including the City of Matlock. The West Lyon Community school district, situated near Inwood (north of Rock Valley) includes a portion of the far northwestern corner of Sioux County, along the Sioux and Lyon County border. Finally, the Remsen Union Community School District reaches into the southeastern corner of Sioux County, south of Granville along the Sioux and Plymouth County border.

Education is a top priority for the residents of Sioux County. Students attending either a public or private education system in Sioux County are sure to find a high quality educational environment in which to learn. Aside from the five public school districts in Sioux County, there are a number of private schools from which residents have the ability to choose. In addition to fine academics taught within Sioux County public and private schools, these education centers promote and encourage the fine arts, performing arts programs, as well as a variety of traditional athletic programs to stimulate all aspects of a student’s education. Following is a listing of all Sioux County schools:

- Boyden-Hull Public Schools
- MOC-FV Public Schools
- Rock Valley Public Schools
- Rock Valley Christian School (K-8)
- Netherlands Reformed School (K-12)
- Ireton Christian School (K-8)
- Sheldon Public Schools
- Sioux Center Public Schools
- Sioux Center Christian Schools
- Spalding Catholic Schools
- Unity Christian High School
- Western Christian High School
- West Sioux Public Schools

Figure 41 – Sioux County Public School Districts Map



School enrollment figures for public schools in Sioux County over the past six years, as well as projected enrollment figures for the next five years are identified below.

Table 32 - Sioux County Public School Enrollment by Year and Projected Enrollment

School	Year	Enrollment	School	Year	Enrollment
MOC-Floyd Valley	2000-01	1,374	Sioux Center	2000-01	937
	2001-02	1,327		2001-02	906

	2002-03	1,311		2002-03	931
	2003-04	1,285		2003-04	921
	2004-05	1,272		2004-05	970
	2005-06	1,299		2005-06	966
<i>Projected enrollment</i>	2006-07	1,298	<i>Projected enrollment</i>	2006-07	982
	2007-08	1,279		2007-08	1,009
	2008-09	1,282		2008-09	1,013
	2009-10	1,290		2009-10	1,034
	2010-11	1,288		2010-11	1,060
Rock Valley	2000-01	566	Boyden-Hull	2000-01	571
	2001-02	568		2001-02	554
	2002-03	565		2002-03	587
	2003-04	588		2003-04	607
	2004-05	608		2004-05	632
	2005-06	626		2005-06	620
<i>Projected enrollment</i>	2006-07	657	<i>Projected enrollment</i>	2006-07	637
	2007-09	690		2007-08	659
	2008-10	706		2008-09	679
	2009-11	729		2009-10	703
	2010-11	754		2010-11	723
West Sioux	2000-01	753			
	2001-02	729			
	2002-03	705			
	2003-04	671			
	2004-05	689			
	2005-06	675			
<i>Projected enrollment</i>	2006-07	674			
	2007-08	661			
	2008-09	654			
	2009-10	657			
	2010-11	658			



Source: Iowa Department of Education, 2007

A brief analysis shows that while two of the five school districts are expecting declines in school enrollment, the overall projections for future school enrollment indicate a growing and healthy increase in the number of students enrolled and being educated across Sioux County. The two districts which showed a decline in both existing and projected enrollment were the MOC-Floyd Valley Community School District located in Orange City and the West Sioux Community School District located in Hawarden. The MOC-FV schools reportedly decline by 75 students or 5.5% between the 2001 and 2006. The other district that showed past trends of declining student enrollment is West Sioux, with a loss of 78 students between 2001 and 2006, accounting for 10.4% of the entire student body. Similarly, these two school districts are also expected to continue losing their student population. MOC-FV is expected to lose an additional 10 students or 0.8% between the 2007 and 2011 school years. Although the actual numbers indicate a slight decline, this really represents a stabilization of a previously declining school district. By 2010 and 2011, the student population at MOC-FV is expected to stabilize and even slightly increase. Likewise, West Sioux

Community schools are projected to experience a decline in enrollment through 2011 resulting in a loss of 16 students accounting for 2.4% of the district population.

Those school districts which have experienced increases in student enrollment over the past six years include Sioux Center, Rock Valley, and Boyden-Hull. All three of these districts are located in the northern half of Sioux County. Rock Valley has seen the largest growth since 2000 with an increase of 60 students or 10.6%. Only slightly behind Rock Valley is the growth experience by Boyden-Hull through an increase of 49 students or 8.6%. Finally, Sioux Center also experienced past increases in student enrollment by 29 students accounting for 2.9%. Following similar trends, all of these school districts are expected to continue their increasing student enrollments. Each school district is projecting impressive growth in their student populations, however Rock Valley is projecting the greatest impact with 97 new students resulting in a nearly 15% increase in students. Boyden-Hull is projected to gain 86 students between 2007 and 2011, an increase of 13.5%; and Sioux Center stands to gain an additional 78 students or 7.9%.

Overall trends for all school districts in Sioux County show that from 2000 to 2006 the total public school enrollment in Sioux County decreased from 4,201 students to 4,186 students; a loss of 15 students or 0.4%. One may ponder how the student enrollment in Sioux County could decline when the county experienced moderate population gains during this same time period. The answer may result from several variables. First, the population increase may be attributed to an older population that does not have children to enroll in the school system. Other contributing variables may be increases experienced in private education or home schooling which would also affect the number of students enrolled in public education. Also, with open enrollment in the public school system, there may be some students who reside in Sioux County but choose to attend another school district seeking alternatives in athletics, academics, or the fine arts. However, even with a current trend showing a stable or slightly declining student population, the project school district enrollment from 2007 through 2011 indicates a net increase of 235 new students in Sioux County resulting in a 5.5% increase countywide. Public school enrollment is projected to near 4,500 students by 2011.

Colleges

In addition to the respected private, parochial and public K-12 school districts in Sioux County, the residents of this county are also fortunate to have the local resources of three higher learning institutions located in Sioux County. The three post-secondary educational opportunities include Northwest Iowa Community College located on western edge of Sheldon, Northwestern College in Orange City and Dordt College in Sioux Center.

NCC (NW Iowa Community College) - is a community and technical college that offers students in northwest Iowa either two-year degrees, one-year diplomas or transfer credits in over 30 programs including healthcare, computers, business, manufacturing, automotive and electrical. Currently, there are over 1,000 students enrolled in credit classes. NCC is an affordable alternative with a convenient location and times for local students.

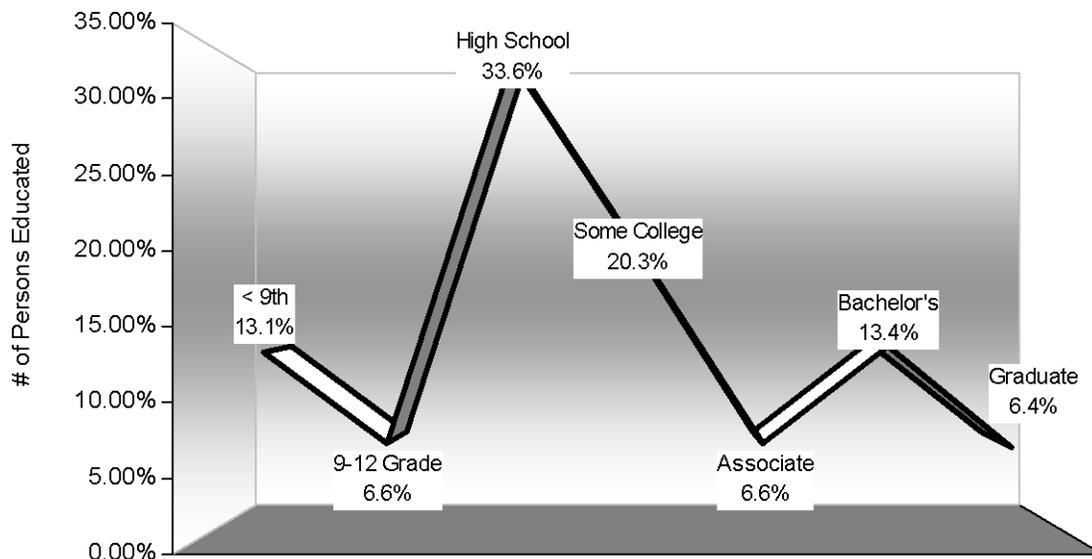
Northwestern College – Founded in 1882, Northwestern College is celebrating its 125 Anniversary in 2007. Northwestern, a private four-year liberal arts college, offers a community of learning where students are challenged with an academically rigorous education that is distinctively Christian and firmly committed to the liberal arts. Northwestern has an enrollment of 1,342 students from 31 states and 23 countries. The most popular areas of study at Northwestern include business, education, biology, kinesiology (athletic training, exercise science) and religion.

Dordt College – was founded in 1955 and welcomes all students interested in a biblical, Christ-centered education. Dordt has a current enrollment of approximately 1,300 students from more than 25 states and 15 countries. This four-year accredited private college is associated with the Christian Reformed Church has 78 full time faculty. The curriculum is designed around a liberal arts education in more than 30 majors and 10 pre-professional programs.

Educational Attainment of Sioux County Residents

According to 2000 U.S. Census Bureau data, of the 31,589 residents in Sioux County, 18,172 are over the age of 25. In identifying the educational attainment level of Sioux County residents, data sources shows slightly more than 13 percent, or nearly 2,400 residents have not obtained a high school education. The largest group of educated persons in Sioux County is those persons who have obtained their high school education or equivalency. Nearly 34 percent of this demographic group or 6,111 Sioux County residents over the age of 25 have obtained their high school education. This group is followed closely by the 3,695 residents (20.3%) who have obtained some college education. Additionally, 2,439 persons (13.4%) are recipients of a Bachelor’s degree and another 1,158 (6.4%) have earned a graduate or professional degree. College educated individuals in Sioux County account for 46.7 percent of the resident population over 25 years of age.

Figure 42 - Educational Attainment of Sioux County Residents, 2000



	Less than 9th	9th-12th Grade	High School Grad	Some College	Associate Degree	Bachelor Degree	Grad or Prof Degree
# of persons	13.10%	6.60%	33.60%	20.30%	6.60%	13.40%	6.40%

According to census data 10,299 persons in Sioux County over the age of three were enrolled in a school in 2000. Of the students residing in Sioux County, 571 or 5.5% were enrolled in preschool and another 466 or 4.5% of children attended Kindergarten. The largest group of persons attending school in Sioux County is the 3,987 elementary age students (grades 1-8) comprising 38.7 percent of the total enrollment. Another 2,355 students or 22.9% attended High School. And finally, a reported 2,920 or 28.4% of persons enrolled during 2000 were either attending a college or graduate school.

Chapter 15. PLAN IMPLEMENTATION

The preceding chapters form the core of the Sioux County Comprehensive Plan with narratives, maps, charts, tables, and statistical information relative to planning desirable future development patterns. This chapter is intended to address those possible means of implementing such objectives and policy recommendations previously outlined in this plan. This chapter will identify those actions needed and recommended to implement the intent and policies outlined in this comprehensive plan.

Because the scope of the Sioux County Comprehensive Plan is long term in nature, its policy recommendations and the idea of implementing such policies may seem daunting. It is for this reason that the Sioux County Board of Supervisors, affected county employees, and specifically the Sioux County Planning and Zoning Commission should utilize this planning document to assist in developing short term improvement programs such as the road improvement plan, capital improvements, financial budgeting, or parks and recreation plan among other examples. Additionally, the Planning Commission should evaluate the comprehensive plan on an annual basis in consideration of changing development patterns which may occur in any given year.

The “Land Use Trends and Policy Recommendations” chapter should be thoroughly reviewed to determine whether or not changes are needed for the enforcement controls or ordinances that are prepared by the county to achieve compliance with this plan. This may include reviewing the county’s zoning and subdivision regulations to establish land use and development standards. Amendments to these control ordinances may include reviewing and rewriting the text in these documents, or amending the official zoning map. Either way, changes recommended for enforcement controls should be in compliance with and consistent with the comprehensive plan’s future land use map.

IMPLEMENTATION STRATEGIES

Sioux County is continuing to grow. With that anticipated growth with bring about many changes relative to the land use patterns already identified and recommended within the Sioux County. Along with change often means having to give something up or accept new means of looking at the same or new issues. This is why people often try to cling to the past. Most people like things the way they are, even though they know change is inevitable. Some people resist change simply out of fear of the future; they are more comfortable with the past or present. Sioux County’s leaders of today and tomorrow are granted the responsibility of identifying, leading, and being the first to accept and embrace the bright future that the county has ahead. Listed below are several identified and attainable implementation strategies in which Sioux County’s planning leaders and government leaders may explore to fully realize the maximum benefit from this comprehensive planning document.

1. Create a three-year action plan addressing county growth, city growth and annexation policies.
2. Establish an annual comprehensive plan review workshop in which members of the public are invited to share with planning officials and Supervisors their thoughts, concerns, and visions for Sioux County’s future.
3. Annually update an inventory of county natural resources; identifying completed and proposed short term and long term park, trail or other natural habitat development.

4. Sioux County, as a growing population center, must exhibit a welcoming and accommodating character to new residents of the county.
5. In establishing any new policy, remember to protect the rights and interests of property owners in Sioux County. Consistency and fairness is a must.
6. Once the county completes a comprehensive review and update of its enforcement ordinances, such as zoning and subdivision regulations, it would be beneficial to Sioux County to have the services of zoning administration and enforcement be consistent with the new or proposed rules adopted by the county.

PERFORMANCE BENCHMARKS

Establishing planning or performance benchmarks is one method that other communities and counties utilize in determining accountability to implementation of the Comprehensive Plan. A benchmark system permits Sioux County to develop general descriptions of what it hopes to achieve by implementing the land use objectives and policy recommendations outlined in the plan. After identifying desired outcomes, the county can then set thresholds or goals for the achievement of the desired outcomes. Periodically, the county should track and review the achievement of desired outcomes from implementing this comprehensive plan. Below is a list of potential benchmarks Sioux County can utilize in determining if it has met the desired objectives and policy recommendations:

1. The rate of conversion of vacant land to improved land.
2. The number of acres of prime agricultural land protected from development.
3. The number of acres of agricultural land converted to developed land.
4. The average sales price of housing.
5. The number of new building permits issued.
6. The achievement of attaining five percent housing vacancy rate.
7. An increase in the amount (in acres) of county park lands per capita.
8. An increase in the amount (in acres) of natural habitat protected from development.
9. A reduction, or at least no new acreage of residential development located in floodplains.
10. The achievement of an identified number of miles (determined by the county) of street repair, resurfaced, or new pavement.

CITED REFERENCES AND INFORMATION SOURCES

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2. United States Census Bureau, 1990 Census, 1980 Census, 1970 Census.
3. *2005 State Profiles*, Woods & Poole Economics, Inc., Washington D.C.
Geographic area: Sioux County, Iowa, 2005.
4. *Iowa's Counties: Selected Population Trends, Vital Statistics, and Socioeconomic Data*, Willis Goudy, Sandra Charvat Burke, and Margaret Hanson, Census Services, Department of Sociology, Iowa State University, Ames, Iowa, 2001 Edition
5. *Estimated Population (1996) and Population (1850-1990) for Incorporated Places in Iowa*, Willis Goudy, Census Services, Iowa State University, Ames, Iowa, 1997.
6. *History of County Governments in Iowa*, Iowa State Association of Counties, Des Moines, Iowa, 1992.
7. *Soil Survey of Sioux County, Iowa*, Robert J. Vobora and Joseph Kristoff, Jr., Soil Conservation Service (a.k.a. Natural Resource Conservation Service), United States Department of Agriculture, 1998.
8. *Iowa's Groundwater Basics, A geological guide to the occurrence, use & vulnerability of Iowa's Aquifers*, Jean Cutler Prior, and others, Iowa Department of Natural Resources, 2003.
9. Iowa Department of Transportation, Division of Planning and Programming, 2004.
10. *Iowa SCORP State Comprehensive Outdoor Recreation Plan*, the Iowa Department of Natural Resources, 2001.
11. *The Landowners Option-A guide to the voluntary protection of land in Iowa*, Iowa Natural Heritage Foundation, Des Moines, Iowa, 1999.
12. *Annual Report of Accomplishments and Results*, Iowa Agricultural and Home Economics Experiment Station, Iowa State University Cooperative Extension Service, Federal Fiscal Year 2004.
13. *Conservation Strategies for Growing Communities*, Natural Resources Conservation Service, Iowa NRCS, 2004.
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15. *Landforms of Iowa*, Jean C. Prior, 1991.
16. *Why Watersheds are Important: A Lesson from the Rock Valley Project*, J. Michael Gannon and Elizabeth A Shinall, Adapted from Iowa Geology 2000, Iowa Department of Natural Resources
17. *2002-2006 Sioux County Building Permits*, Sioux County Zoning Administrators Office, Sioux County Public Safety Complex, 2006

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1. komodo.gis.iastate.edu/new_site/ Iowa Geographic Map Server, GISU-ISU GIS Facility Topographic, contour, and aerial photos (orthographic maps) of Sioux County
2. www.msp.dot.state.ia.us/trans_data/traffic/index.html
Iowa Department of Transportation, Traffic Flow Map & Federal Functional Classification Map 2003 IDOT traffic survey
3. www.iowaworkforce.org/lmi/
Iowa Labor Market Information, Iowa Workforce Development, 2007
4. www.census.gov/econ/census02/
U.S. Census Bureau, 2002 Economic Census site
5. www.seta.iastate.edu/
SETA – Office of Social and Economic Trend Analysis, Iowa State University, Ames, Iowa Support provided by: Iowa State University, the Agricultural Experiment Station, ISU Extension Community and Economic Development, College of Agriculture, Department of Economics, and Department of Sociology.
Retail Trade Data supported with data from the Iowa Department of Revenue and Finance
6. www.seta.iastate.edu/takecharge
SETA – Take Charge: current trends, characteristics and analysis of Sioux County
7. www.airnav.com/airport
Airport information and statistics for the Sioux Center, Rock Valley and Hawarden Airports
8. www.iowadnr.com/wildlife/
Iowa Department of Natural Resources; information of state lakes and state preserves
9. www.ia.nrcs.usda.gov/
Iowa Natural Resource Conservation Service; conservation development practices
10. www.smartgrowth.org
Smart Growth Online; research about the principals and issues of smart growth
11. www.extension.iastate.edu/
Iowa State University Extension web site; Iowa Farmland Values
12. www.awea.org/
American Wind Energy Association
13. www.nwiarides.org/
RIDES, dba Regional Transit Authority
14. www.ruraldev.usda.gov/ia/
USDA Rural Development – Community Programs, water and wastewater
15. www.nationalregisterofhistoricplaces.com/IA/Sioux/
The National Register of Historic Places, Sioux County Iowa database
16. www.energy.iastate.edu/
Renewable Energy Source, Iowa Wind Projects
17. www.itsgood4.us/
Alternative Fuels web site (ethanol, wind energy, soy biodiesel)

REFERENCED WEBSITE RESOURCES (Continued)

18. www.e85fuel.com
Database of National Ethanol Vehicle Coalition
19. www.iowacorn.org/ethanol/
Ethanol Plants in Iowa
20. www.iasoybeans.com/
Iowa Soybean Association; Biodiesel at the pump and delivery
21. www.city-data.com
City-data.com is an online collection of analyzed data from numerous sources to create profiles of U.S. cities.
22. <http://www.siouxcounty.org/>
The official Sioux County website. Covering topics such as the Assessor, Attorney, Auditor, Board of Supervisors, Emergency Management, Engineer, Information Technology, Sheriff, and Zoning.
23. <http://iagenweb.org/>
IA GenWeb Project: Greater Sioux County Genealogical Society (GSCGS) – Sioux County township information
24. <https://www.edinfo.state.ia.us/web/projection06.asp>
Iowa Department of Education – school district enrollment projections
25. <http://www.siouxcountysheriff.com/>
Sioux County Sheriff's Department website
26. <http://www.ochealthsystem.org/>
Orange City Area Health System website – areas of practice and services offered
27. <http://www.averamckennan.org/amck/regionalfacilities/siouxcenter/>
Sioux Center Community Hospital & Health Center website – areas of practice & services offered
28. <http://www.heggmemorialhealthcenter.org/hospital.htm>
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30. 2007 Major Industries list aided with research from: www.siouxcenterchamber.com/business; www.orangecityiowa.com/economicbodies; www.cityofrockvalley.com; www.boydeniowa.net/business; www.hawardendevelopment.com; www.cityofhull.org/businesses; www.altoniowa.org/businesses;

APPENDIX 1

Detailed Schedules of Soil Suitability Based Upon Types of Use

- ◆ Prime and Other Important Farmlands
- ◆ Dwellings and Small Commercial Buildings (limiting features)
- ◆ Sewage Disposal (septic tank absorption fields and sewage lagoons)
- ◆ Roads and Streets, Shallow Excavations, and Lawns and Landscaping (limiting features)

The following soil suitability schedules were provided from the
Soil Survey of Sioux County, Iowa,

USDA Natural Resource Conservation Service
Tabular Data Version 13: Date: 11/22/2006